HCD-VX8/VX8J

SERVICE MANUAL

E Model

Photo: HCD-VX8 (SILVER)

HCD-VX8/VX8J is the tuner, deck, CD and amplifier section in MHC-VX8/VX8J.

This stereo system is equipped with the Dolby B-type noise reduction system*.
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CD SECTION	Model Name Using Similar Mechanism	HCD-GRX80/RXD8/RXD8S
	CD Mechanism Type	CDM38L-5BD34L
	Base Unit Type	BU-5BD34L
	Optical Pick-up Type	KSS-213D/Q-NP
TAPE DECK SECTION	Model Name Using Similar Mechanism	HCD-GRX80/RXD8/RXD8S
	Tape Transport Mechanism Type	TCM-230AWR2/230PWR2

SPECIFICATIONS

Amplifier section

The following measured at AC 120, 220, 240 V 50/60 Hz
DIN power output (rated) 160 + 160 watts (6 ohms at 1 kHz, DIN)
Continuous RMS power output (reference) 200 + 200 watts (6 ohms at 1 kHz, 10% THD)

Inputs
MD IN: (phono jacks) voltage 450 mV, impedance 47 kilohms
VIDEO (AUDIO) IN: (phono jacks) voltage 250 mV, impedance 47 kilohms
MIC 1/2: (phone jack) sensitivity 1 mV, impedance 10 kilohms

Outputs
MD OUT (phono jacks): voltage 250 mV, impedance 1 kilohms
VIDEO OUT (phono jack): max. output level 1Vp-p, unbalanced, Sync negative, load impedance 75 ohms
S-VIDEO OUT (4-pin/mini-DIN jack): Y: 1Vp-p, unbalanced, Sync negative, C: 0.286Vp-p, load impedance 75 ohms
PHONES (stereo phone jack): accepts headphones of 8 ohms or more
SPEAKER: accepts impedance of 6 to 16 ohms
SURROUND SPEAKER: accepts impedance of 16 ohms
SUPER WOOFER: Voltage 1 V, impedance 1 kilohm

VIDEO CD/CD player section

System: Compact disc and digital audio and video system
Laser: Semiconductor laser (λ=780nm) Emission duration: continuous
Laser output: Max. 44.6 μW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Wavelength: 780 – 790 nm
Frequency response: 2 Hz – 20 kHz (±0.5 dB)
Signal-to-noise ratio: More than 90 dB
Dynamic range: More than 90 dB
Video color system format: NTSC, PAL

CD OPTICAL DIGITAL OUT
(Square optical connector jack, rear panel)
Wavelength: 660 nm
Output Level: –18 dBm

Tape player section

Recording system: 4-track 2-channel stereo
Frequency response (DOLBY NR OFF): 40 – 13,000 Hz (±3 dB), using Sony TYPE I cassette
40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range: 87.5 – 108.0 MHz
Antenna: FM lead antenna
Antenna terminals: 75 ohm unbalanced
Intermediate frequency: 10.7 MHz

AM tuner section

Tuning range
2 Band type: 531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
3 Band type:
Middle Eastern models:
MW: 531 – 1,602 kHz (with the interval set at 9 kHz)
SW: 5.95 – 17.90 MHz (with the interval set at 5 kHz)

— Continued on next page —

COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

Other models:

MW:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
SW:	5.95 – 17.90 MHz (with the interval set at 5 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements	
Thai models:	220 V AC, 50/60 Hz
Other models:	120 V, 220 V or 230 - 240 V AC, 50/60 Hz Adjustable with voltage selector
Power consumption:	190 watts
Dimensions (w/h/d)	Approx. 280 x 360 x 395 mm ($13^{1}/_{8}$ x $14^{1}/_{4}$ x $15^{5}/_{8}$ in.)
Mass:	Approx. 12.4 kg
Supplied accessories:	AM loop antenna (1) Remote commander (1) Batteries (2) FM lead antenna (1) Speaker cords (4) Video cable (1) Front speaker pads (8)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

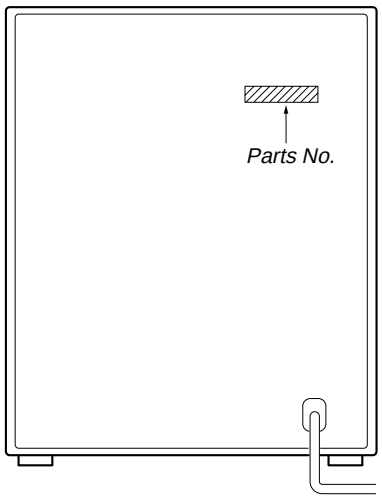
CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MODEL IDENTIFICATION
— BACK PANEL —



PARTS No.	MODEL	PRODUCT COUNTRY
4-215-641-0☐	VX8: EA	MALAYSIA
4-215-641-1☐	VX8: MY, SP	MALAYSIA
4-215-641-2☐	VX8: TW	MALAYSIA
4-215-641-3☐	VX8: E	MALAYSIA
4-215-641-4☐	VX8: IA	INDONESIA
4-215-641-5☐	VX8: HK	MALAYSIA
4-215-641-6☐	VX8J: E	JAPAN
4-215-641-7☐	VX8J: EA	JAPAN
4-215-641-8☐	VX8: TH	THAI

- Abbreviation
  EA : Saudi Arabia model
  TW : Taiwan model
  IA : Indonesia model
  HK : Hong Kong model
  TH : Thai model
  MY : Malaysia model
  SP : Singapore model

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

Carry out the “S curve check” in “CD section adjustment” and check that the S curve waveform is output four times.

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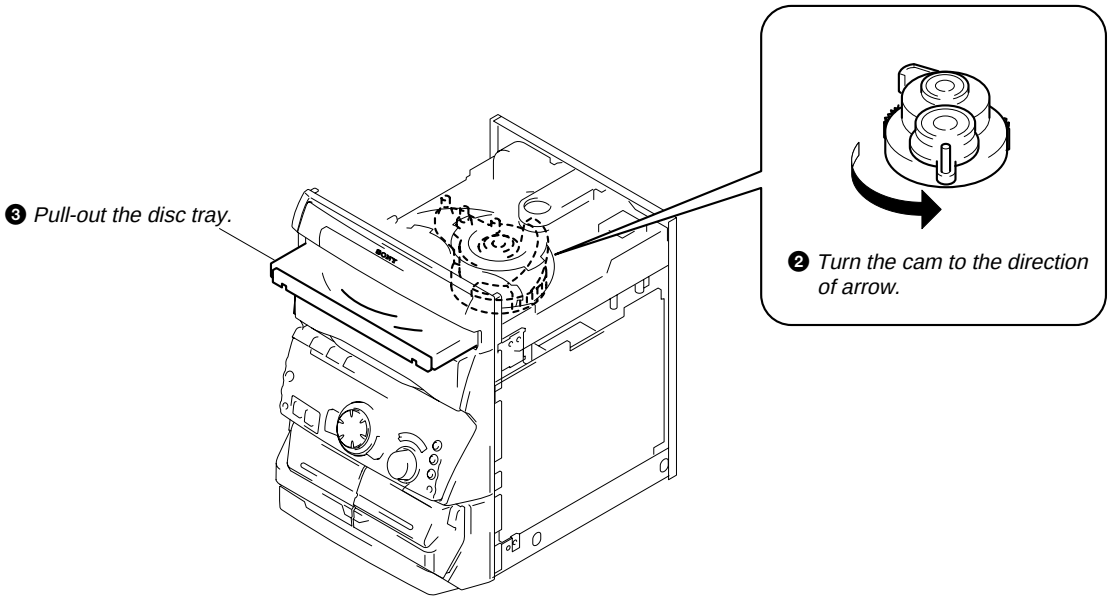
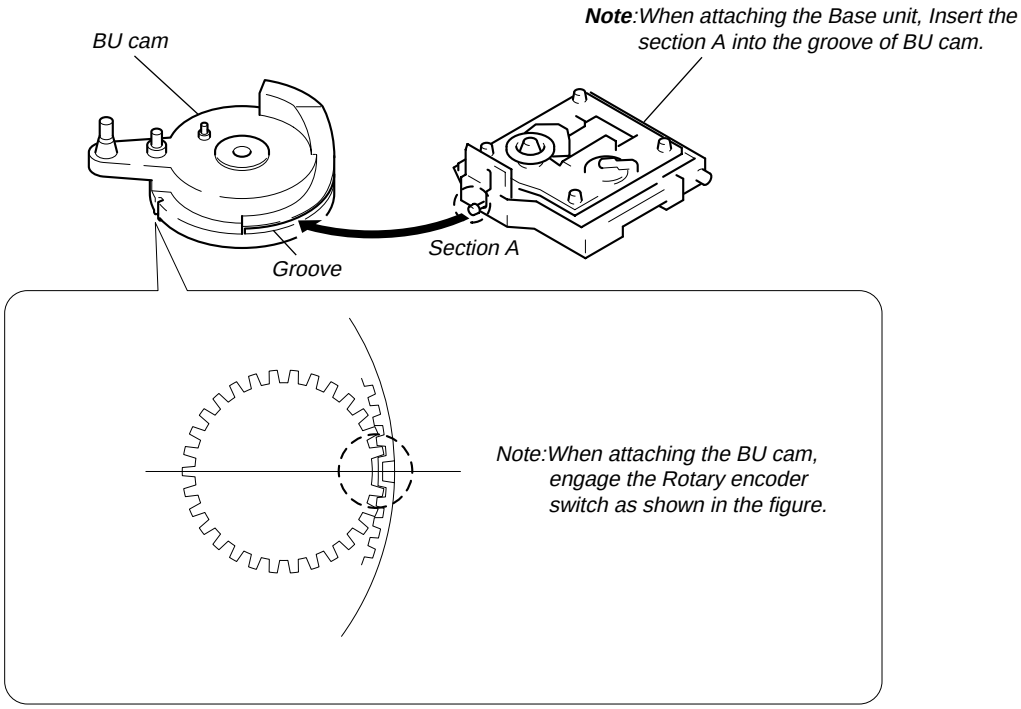
SECTION 1
SERVICING NOTE

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

❶ *Remove the Case.*



NOTE FOR INSTALLATION (ROTARY ENCODER)

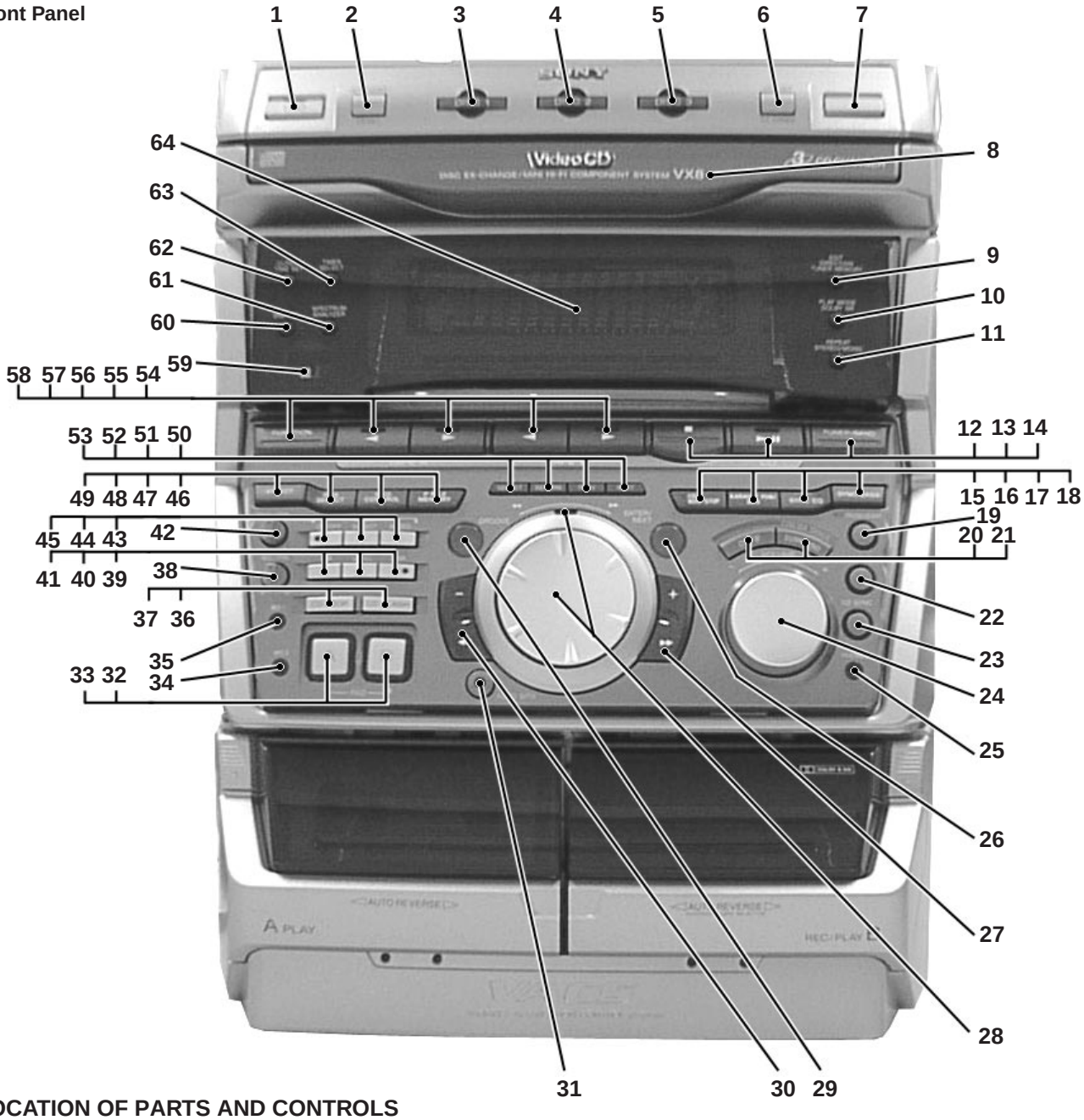

BU cam
Note:When attaching the Base unit, Insert the section A into the groove of BU cam.
Section A
Groove
Note:When attaching the BU cam, engage the Rotary encoder switch as shown in the figure.

CD-TEXT

This unit is provided with a simple CD-TEXT display function.
The CD-TEXT contents of 20 tracks are displayed on the fluorescent display tube.
Since the function is simple, some special characters may not be displayed, or may be displayed as other characters.

SECTION 2
GENERAL

Front Panel

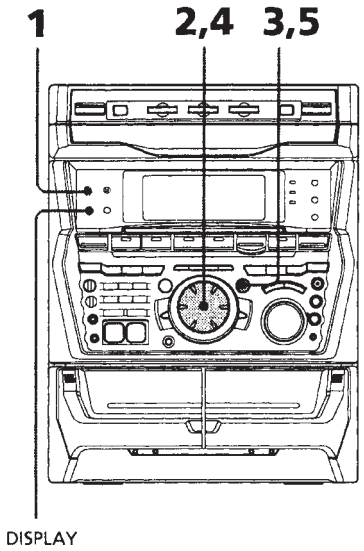


LOCATION OF PARTS AND CONTROLS

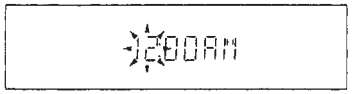
1 I/⏻ (Power) button and indicator
2 DEMO (STANDBY) button
3 DISC 1 button and indicator
4 DISC 2 button and indicator
5 DISC 3 button and indicator
6 DISC SKIP/EX–CHANGE button
7 ⏏ (Eject) button
8 Disc tray
9 EDIT DIRECTION/TUNER MEMORY button
10 PLAY MODE/DOLBY NR button
11 REPEAT/STEREO/MONO button
12 ■ button
13 ▶II (CD) button and indicator
14 TUNER/BAND button
15 CD NON-STOP button and indicator
16 KARAOKE PON/MPX button
17 SYNC EQ button
18 SYNC BASS button
19 REC PAUSE/START button and indicator
20 DBFB button
21 SURROUND button
22 HI DUB button
23 CD SYNC button
24 VOLUME knob
25 PHONES jack
26 ENTER/NEXT button
27 ▶▶ + button and indicator
28 JOG/◀◀ ▬▬ ▶▶ dial and indicator
29 GROOVE button and indicator
30 ◀◀ – button and indicator
31 AUTO BPM button and indicator
32 PAD B button and indicator
33 PAD A button and indicator
34 MIC 2 jack
35 MIC 1 jack
36 CD FLASH button
37 CD LOOP button
38 MIC LEVEL knob
39 JAM button and indicator
40 LEVEL button
41 MIX button
42 ECHO LEVEL knob
43 BEAT SPEED button
44 BEAT SELECT button
45 BEAT ON/OFF button and indicator
46 P FILE MEMORY button
47 GEQ CONTROL button
48 FILE SELECT
49 EFFECT button
50 NEXT button
51 PREV button
52 RETURN button
53 SELECT button
54 ► (TAPE B) button and indicator
55 ◄ (TAPE B) button and indicator
56 ► (TAPE A) button and indicator
57 ◄ (TAPE A) button and indicator
58 FUNCTION button
59 Remote sensor
60 DISPLAY button
61 SPECTRUM ANALYZER button
62 CLOCK/TIME SET button
63 TIMER SELECT button and indicator
64 Display Window

Step 2: Setting the time

You must set the time before using the timer functions.



1 Press CLOCK/TIMER SET.
The hour indication flashes.



2 Turn the jog dial to set the hour.

3 Press ENTER/NEXT.
The minute indication flashes.

4 Turn the jog dial to set the minute.

5 Press ENTER/NEXT.
The clock starts working.

Tip

If you've made a mistake, start over from step 1.

To change the time

The previous explanation shows you how to set the time while the power is off. To change the time while the power is on, do the following:

1 Press CLOCK/TIMER SET.
2 Turn the jog dial to select SET CLOCK.
3 Press ENTER/NEXT.
4 Perform steps 2 through 5 above.

Note

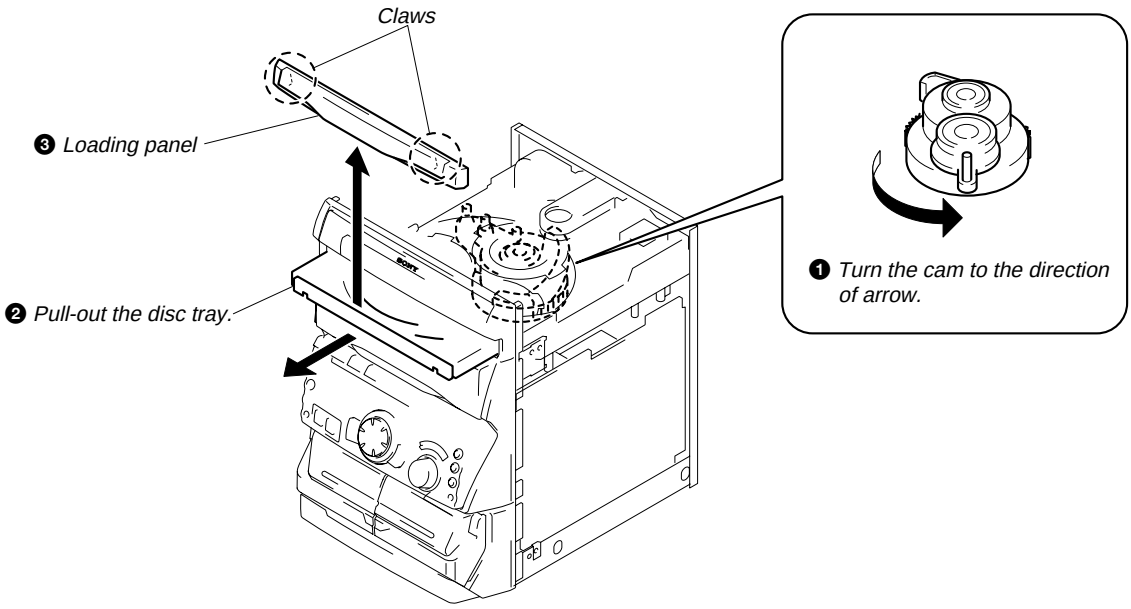
The clock settings are cancelled when you disconnect the power cord or if a power failure occurs.

This section is extracted from instruction manual.

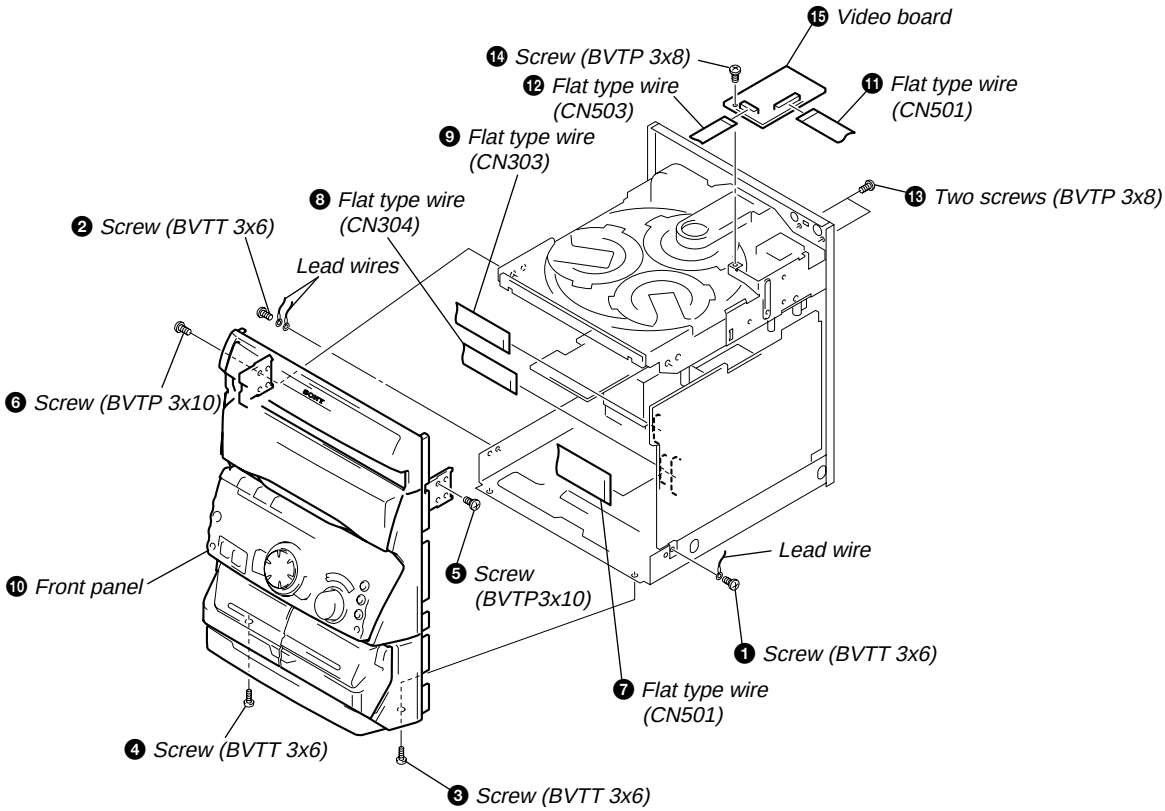
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

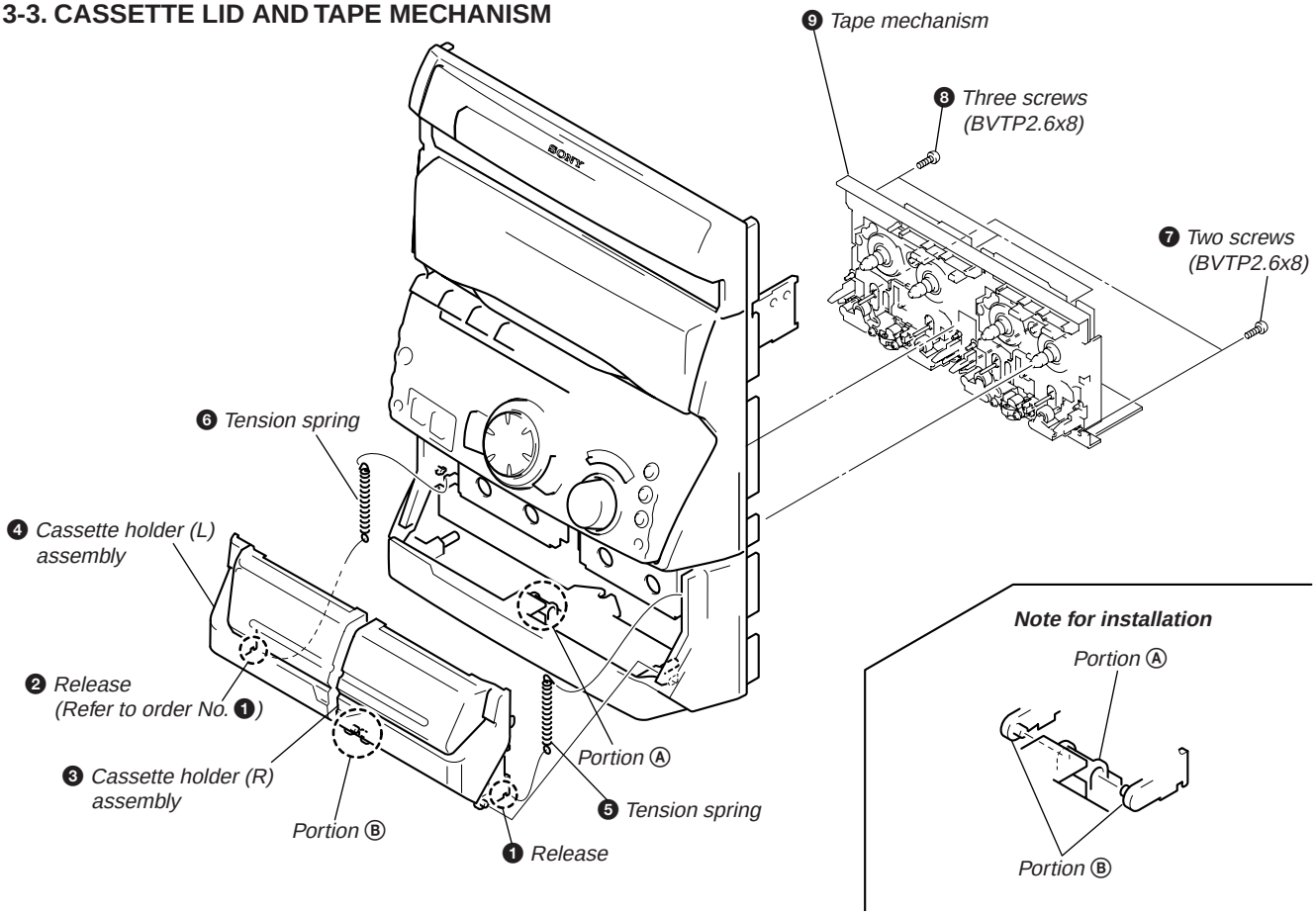
3-1. LOADING PANEL



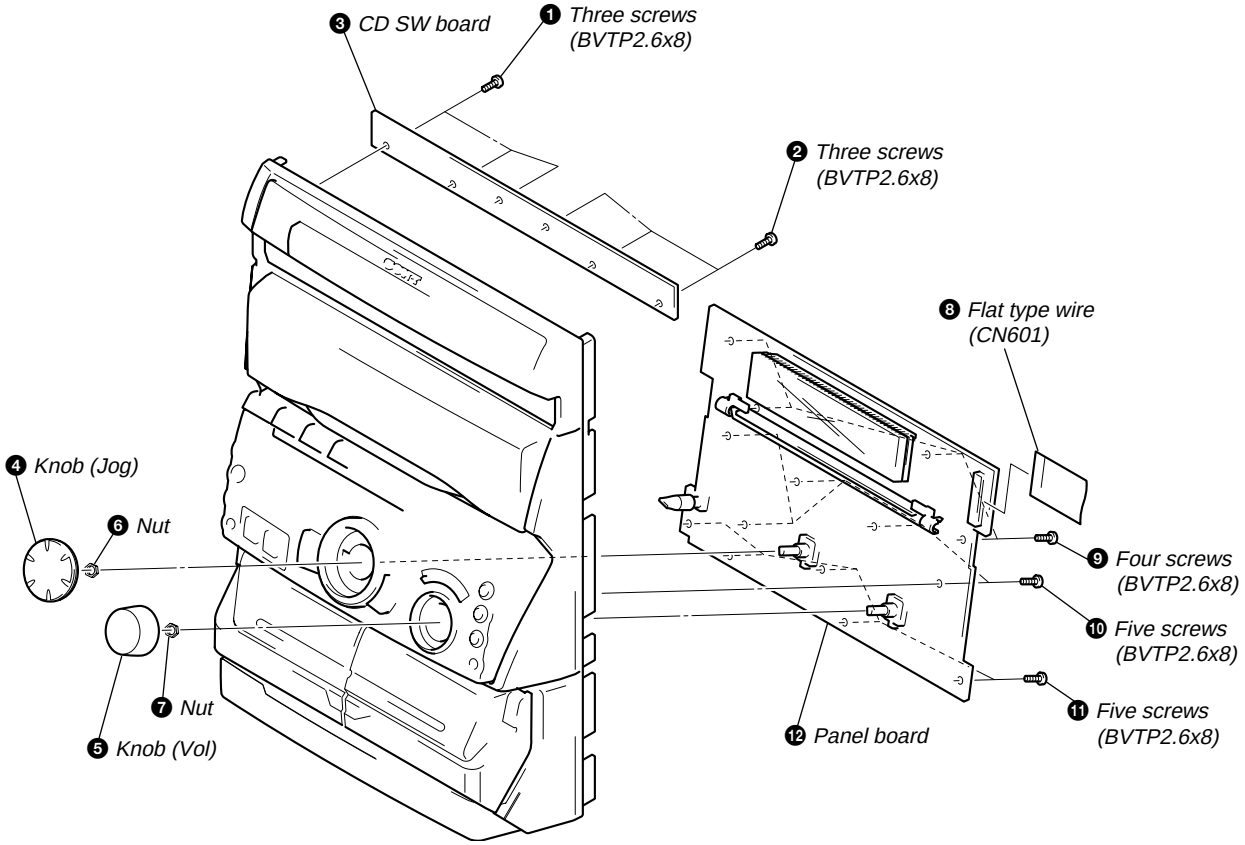
3-2. FRONT PANEL AND VIDEO BOARD



3-3. CASSETTE LID AND TAPE MECHANISM



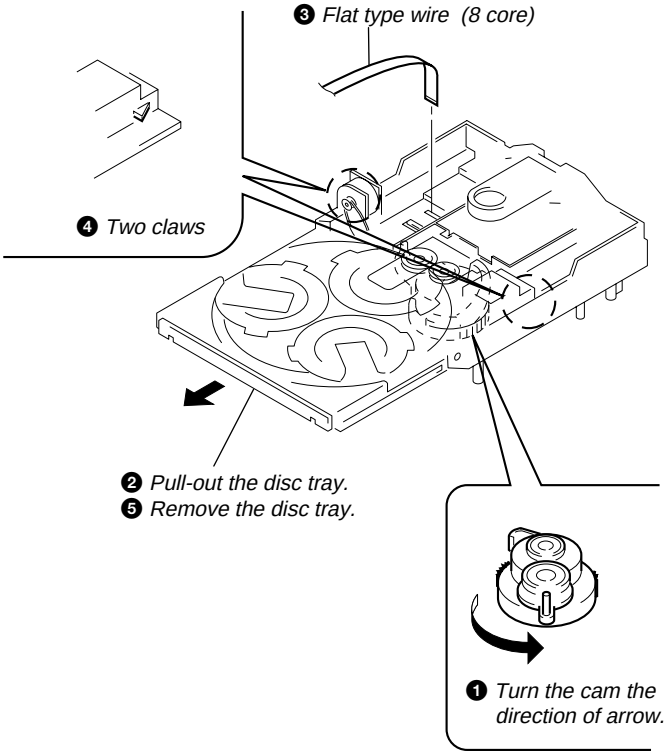
3-4. CD SW BOARD AND PANEL BOARD

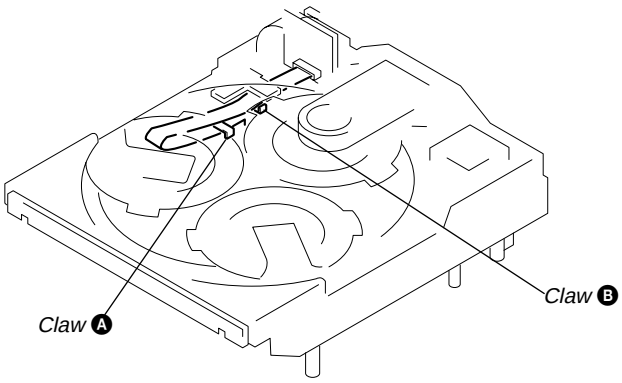


3-5. DISC TRAY

(Perform after removing the front panel.)

Note:*When installing the Disc tray, pull around the flat type wire to pass through the claw* Ⓐ *and claw* Ⓑ*, as shown in the figure.*





SECTION 4
SERVICE MODE

MC Cold Reset

• The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [■] , [ENTER/NEXT] , and [I/⏻] simultaneously.
2. "COLD RESET" is displayed on the fluorescent display tube and reset is executed.

CD Delivery Mode

• This mode moves the optical pick-up to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [LOOP] button and [I/⏻] button simultaneously.
3. A message "LOCK" is displayed on the fluorescent indicator tube, and the CD delivery mode is set.

MC Hot Reset

• This mode resets the set with the preset data kept stored in the memory. The hot reset mode functions same as if the power cord is plugged in and out.

Procedure:

1. Press three buttons [■] , [ENTER/NEXT] , and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

Sled Servo Mode

• This mode can run the CD sled motor freely. Use this mode, for instance, when cleaning the pick-up.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press three buttons [■] , [ENTER/NEXT] , and [⏏] simultaneously.
3. The Sled Servo mode is selected, if "CD" is blanking on the fluorescent indicator tube.
4. With the CD in stop status, When the [►► +] button is pressed the optical pick-up moves outside. When [– ◄◄] button is pressed , it moves inside.
5. To exit from this mode, perform as follows:
   1) Move the optical pick-up to the most inside track.
   2) Execute MC cold reset. (Press the three buttons [■] , [ENTER/NEXT] , and [I/⏻] button simultaneously.)

Note:

• Always move the optical pick-up to most inside track when exiting from this mode. Otherwise, a disc will not be unloaded.
• Do not run the sled motor excessively, otherwise the gear can be chipped.

Change-over of AM Tuner Step between 9kHz and 10kHz

• A step of AM channels can be changed over between 9kHz and 10kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [ENTER/NEXT] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9k STEP" or "AM 10k STEP", and thus the channel step is changed over.

LED and Fluorescent Indicator Tube All Lit, Key Check Mode

Procedure:

1. Press three buttons [■] , [ENTER/NEXT] , and [DISC 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
   Press [DISC 2] button, and the key check mode is activated.
3. In the key check mode, the fluorescent indicator tube displays "K 0 V0 J0". Each time a button is pressed, "K"value increases. However, once a button is pressed, it is no longer taken into account.
   "J" Value increases like 1, 2, 3 ... if rotating [◄◄ AMS ►►] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
   "V" Value increases like 1, 2, 3 ... if rotating [VOLUME] knob in "+" direction, or it decreases like 0, 9, 8 ... if rotating in "-" direction.
4. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

AMS Test Mode

• This mode is used for checking the AMS operations of the tape deck.

JIG

7-819-039-12 Alignment tape, AMS-110A

Procedure:

1. Press the I/⏻ button to turn the unit ON.
2. Set the tape (AMS-110A).
3. Press the three buttons ■ , ENTER/NEXT , and DISC 3 button simultaneously.
4. "TEST MODE" is displayed on the fluorescent display tube.
5. Press the FUNCTION button and switch the function to the deck with the tape (AMS-110A).
6. Press the CD SYNC button. "AMS CHECK" is displayed on the fluorescent display tube and the tape is rewound.
7. AMS starts in the normal direction. If the AMS count is 2 at shut down, proceed to step 8.
   "NG" is displayed at other times, and the deck stops.
8. AMS starts in the opposite direction. If the AMS count is 2 at shut down again, "OK" is displayed.
   "NG" is displayed at other times.

Note: The ■ button of CD section will become effective and the aging of CD section will stop sometime, if the buttons described in step 3 are not pressed simultaneously. In that case, press ▶II button and operate the CD section.

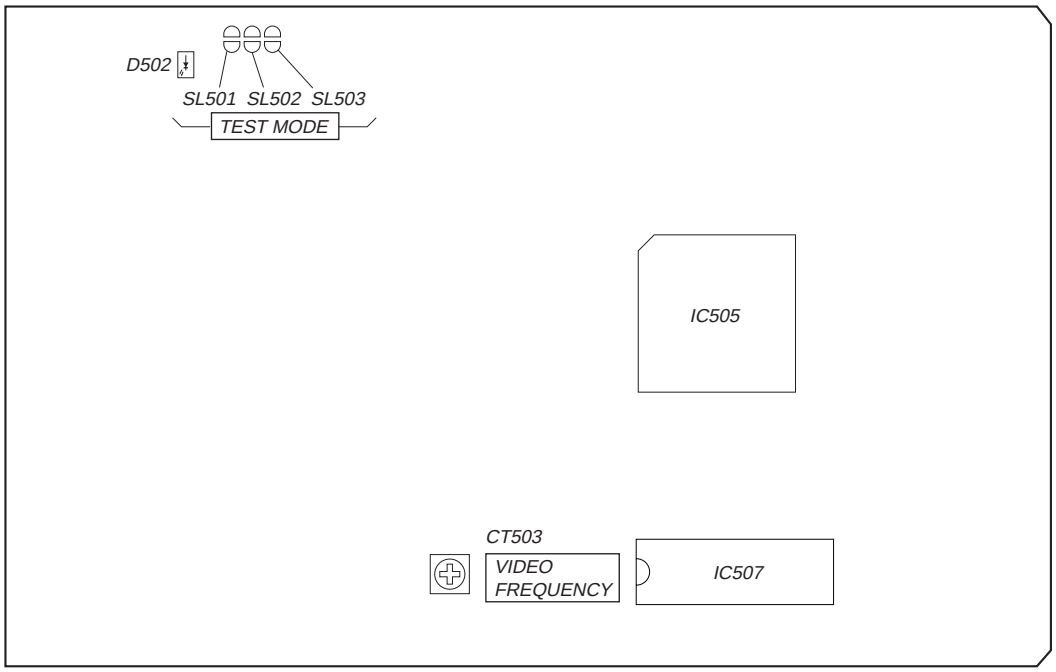
SECTION 5
TEST MODE

VIDEO CD COLOR-BARS MODE

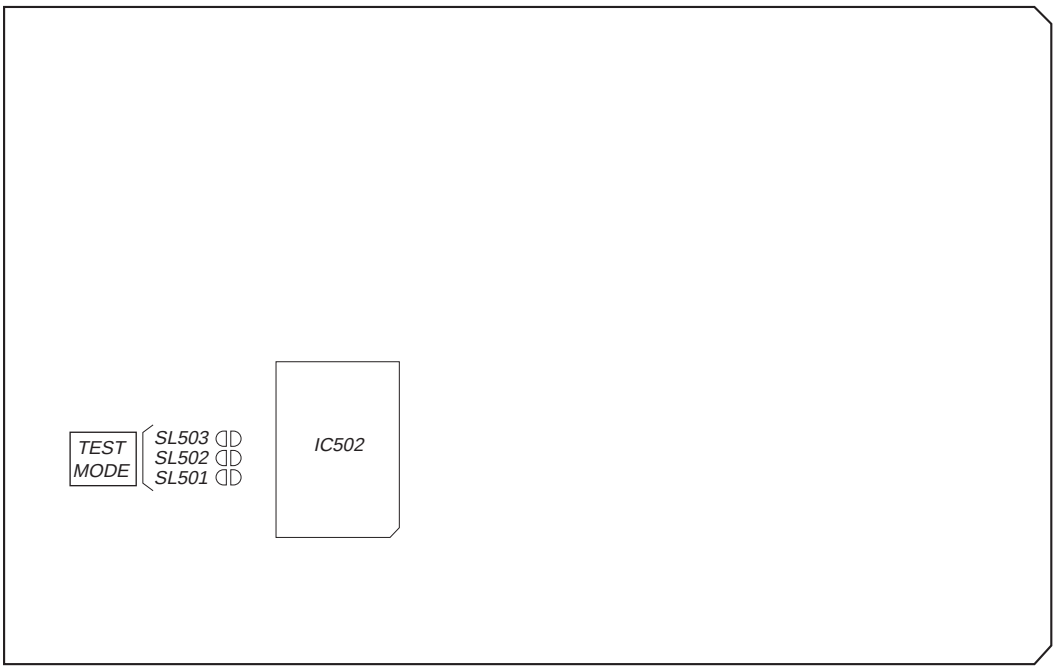
On this mode, the data of the color-bars signal as a picture signal and the 1kHz sine wave signal as a sound signal are output by the mechanism control microcomputer (IC502) for video CD signal check. When measurement of the voltage and waveform on the VIDEO board, perform it in this mode.
For refernce, the color-bars signal can be observed at J302 (VIDEO OUT) and the sound signal can be observed at J101 (VIDEO/MD (AUDIO) OUT) using an oscilloscope.

1. Connect the lead wire to both ends of the land of SL503 of the VIDEO board.
2. Turn the power on. Press FUNCTION button to select CD.
3. After 2 or 3 seconds later, connect the lead wire.
4. After measuring, remove the lead wire connected.

[VIDEO BOARD] (SIDE A)



[VIDEO BOARD] (SIDE B)



SECTION 6
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads, erase head, capstan, pinch rollers, rubber belts, idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	100 g or more (3.53 oz or more)
REV tension	CQ-403R	100 g or more (3.53 oz or more)

SECTION 7
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head damagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

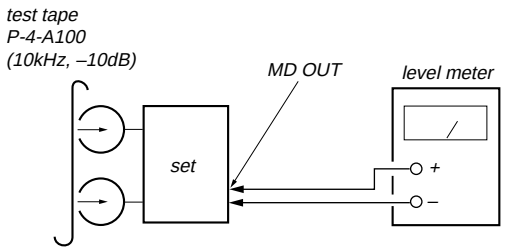
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

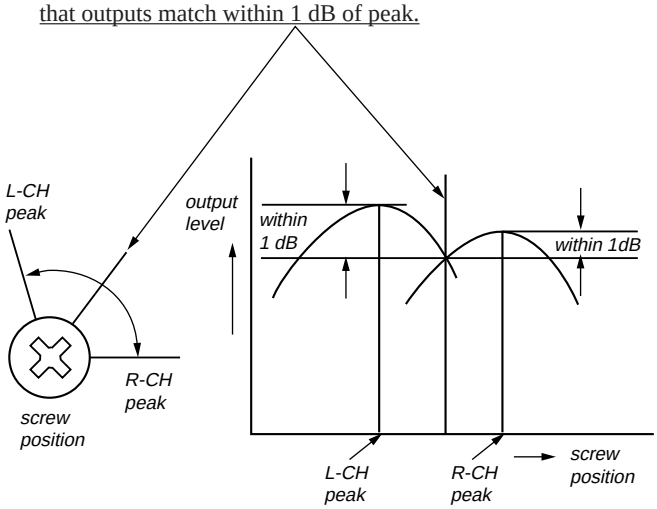
Note: Perform this adjustments for both decks.

Procedure:

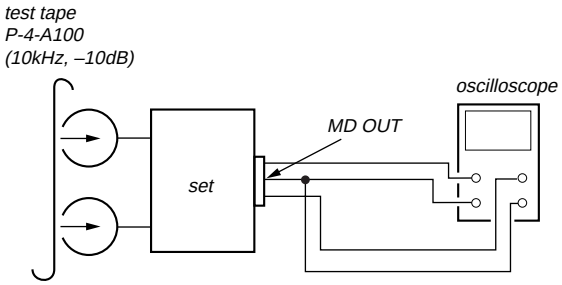
1. Mode : Playback

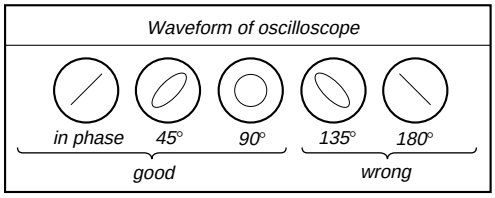


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1 dB of peak.



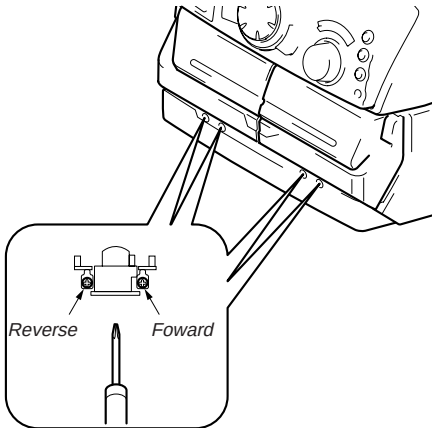
3. Mode: Playback





4. After the adjustments, apply suitable locking compound to the parts adjusted.

Adjustment Location: Playback Head (Deck A)
Record/Playback/Erase Head (Deck B)



Tape Speed Adjustment (Deck A)

Note: Set the test mode using the following method and begin tape speed adjustment.
In the test mode, the speed will switch to double speed or normal speed each time the HI DUB button is pressed.

Procedure:
With the power turned ON, press the ■ button, ENTER/NEXT button, and DISC 3 button simultaneously.
(The "CD TYPE INDICATOR" on the fluorescent display tube will blink while in the test mode.)
To exit the test mode, press the I/⏻ button.

1. Insert the WS-48B into deck B.
2. Press the ► button of deck B.
3. Press the HI DUB button and play the tape at double speed.
4. Adjust RV1001 of the LEAF SW board so that the reading of the frequency counter becomes 6000 ± 180 Hz.
5. Press the HI DUB button and play the tape at normal speed.
6. Adjust RV1002 of the LEAF SW board so that the reading of the frequency counter becomes 3000 ± 90 Hz.

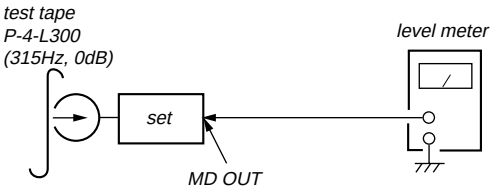
Adjustment Location: LEAF SW board

Sample Value of Wow and flutter

W.RMS (JIS) less than 0.3%
(test tape: WS-48B)

Playback Level Adjustment (Deck A, Deck B)

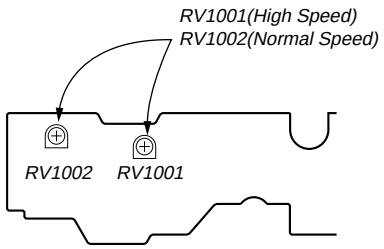
Procedure:
Mode: Playback



Deck A is RV311 (L-CH) and RV411 (R-CH), deck B is RV301 (L-CH) and RV401 (R-CH)
so that adjustment within the following adjustment level.

Adjustment level:
CN301 playback level: 301.5 to 338.3 mV (–8.2 to –7.2 dB)
level difference between the channels: within ± 0.5 dB
Adjustment Location: AUDIO board

Adjustment Location [LEAF SW BOARD]

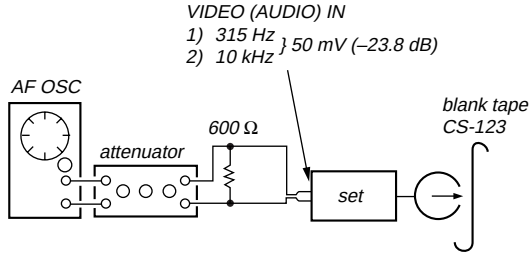


Record Bias Adjustment (Deck B)

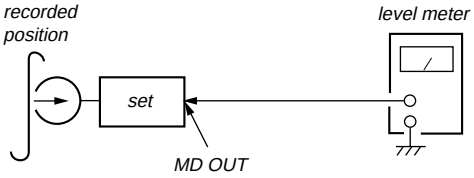
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the [– ◀◀] button without stopping will return to the position where recording was started.)

1. Press [FUNCTION] button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B, press the [● REC] button, and then press the [►] button to start recording.
3. Mode: Record



4. Mode: Playback



5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV341 (L-CH) and RV441 (R-CH) on the AUDIO board to repeat steps 3 and 4.

Adjustment level: The playback output of 10 kHz level difference against 315 Hz reference should be ± 1.0 dB.

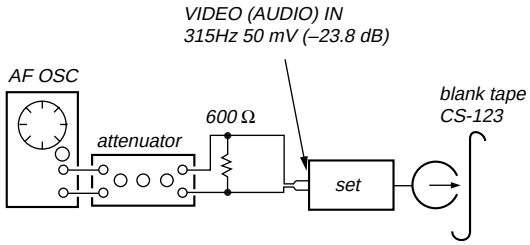
Adjustment Location: AUDIO board

Record Level Adjustment (Deck B)

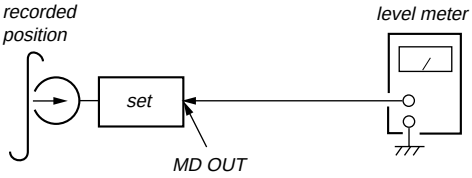
Procedure:

INTRODUCTION
When set to the test mode performed in **Tape Speed Adjustment**, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(After recording, press the [– ◀◀] button without stopping will return to the position where recording was started.)

1. Press [FUNCTION] button to select VIDEO 1. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B, press the [● REC] button, and then press the [►] button to start recording.
3. Mode: Record



4. Mode: Playback

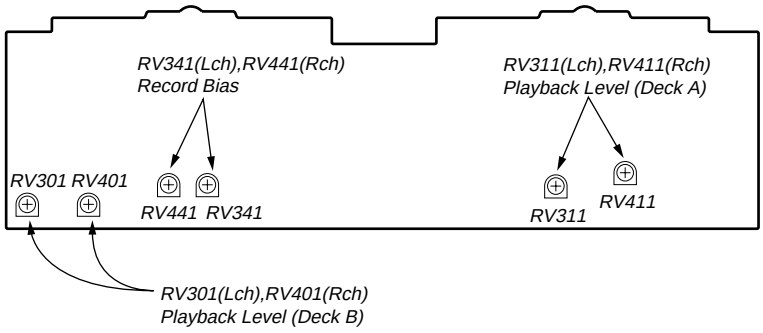


5. Confirm playback the signal recorded in step 2 become adjustment level as follows.
   If these levels do not adjustment level, adjust the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 3 and 4.

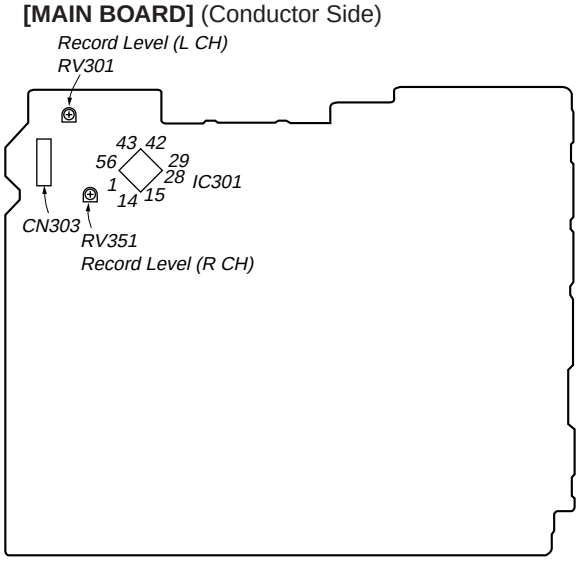
Adjustment level:
CN403 playback level: 47.2 to 53.0 mV (–24.3 to –23.3 dB)

Adjustment Location: MAIN board

Adjustment Location:
[AUDIO BOARD] (Conductor Side)



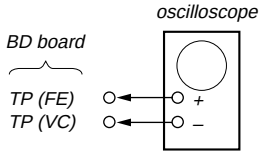
[MAIN BOARD] (Conductor Side)



CD SECTION

Note:
1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

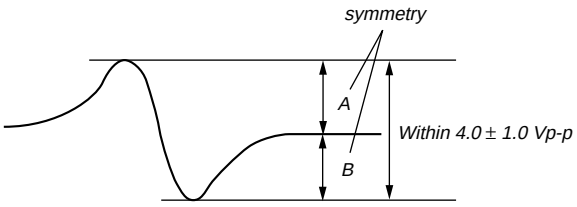
S Curve Check



Adjustment Location: BD board

Procedure :
1. Connect the oscilloscope to test points TP (FE) and TP (VC).
2. Connect TP (FEI) and GND, and TP (AGCCON) and GND of the BD board with lead wires.
3. Press the I/⏻ button to turn the set ON.
4. With the disc (YEDS-18) loaded, press the ▶II button and perform focus search. (Focus search will be performed in the same way even while the disc table is pushed in and out.)
5. Check the symmetry and peak to peak level of the oscilloscope waveform (S curve) at this time.

S-curve waveform

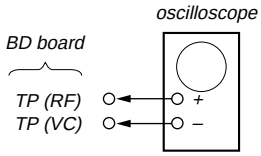


6. After check, remove the lead wire connected in step 2.

Note: • Try to measure several times to make sure than the ratio of A : B or B : A is more than 10 : 7.
• Take sweep time as long as possible and light up the brightness to obtain best waveform.

Adjustment Location: BD board

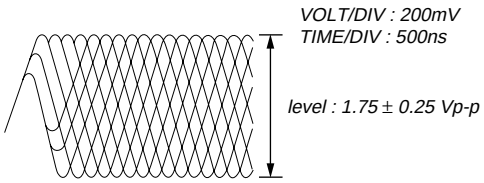
RF Level Check



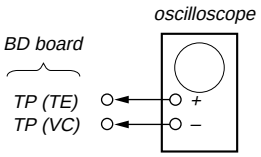
Procedure :
1. Connect oscilloscope to test point TP (RF) and TP (VC) on BD board.
2. Connect TP (AGCCON) and GND of the BD board with lead wires.
3. Press the I/⏻ button to turn the set ON.
4. Put disc (YEDS-18) in and playback 5track.
5. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.
6. After check, remove the lead wire connected in step 2.

Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.

RF signal waveform



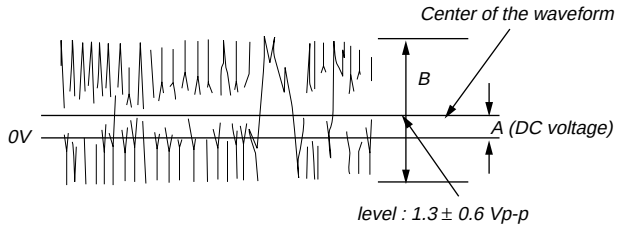
E-F Balance (Traverse) Check



Adjustment Location: BD board

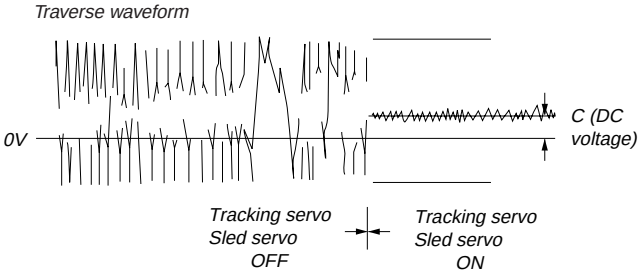
Procedure :
1. Connect oscilloscpe to test point TP (TE) on BD board.
2. Short-circuit SL502 of the video board to GND.
3. Turned Power switch on. Press FUNCTION button to select CD.
4. Put disc (YEDS-18) in to play the number five track.
5. Press the PLAY MODE/DOLBY NR button. (The tracking servo and the sledding servo are turned OFF.)
6. Check the level B of the oscilliscope's waveform and the A (DC voltage) of the center of the Traverse waveform.
   Confirm the following :
   A/B x 100 = less than ± 22%

Traverse waveform



7. Press the PLAY MODE/DOLBY NR button. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 7.

Traverse waveform

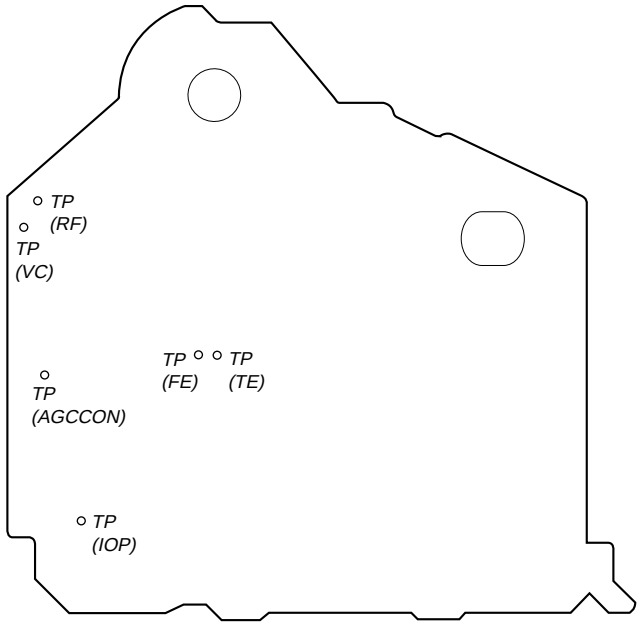


8. Desolder the short-land (SL502) short-circuited at step 2.

Adjustment Location: BD board

Adjustment Location :

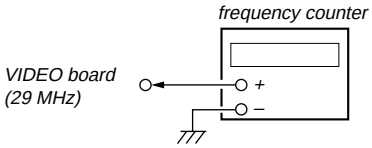
[BD BOARD] — SIDE B —



VIDEO SECTION

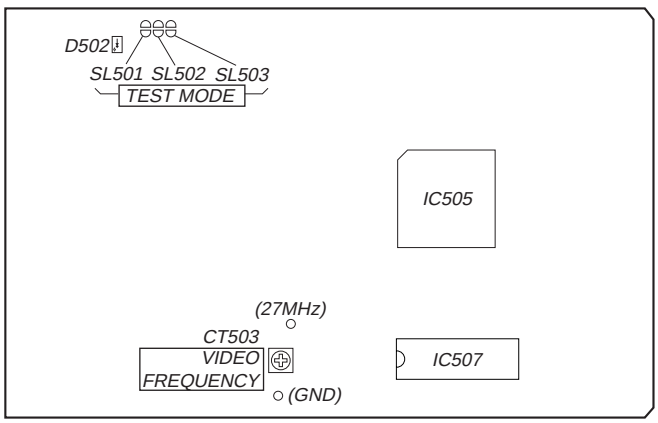
Frequency adjustment

1. Connect the frequency counter to check point of the VIDEO board.
2. Adjust CT503 of the VIDEO board so that the frequency counter read 27MHz ± 80Hz at STOP condition.

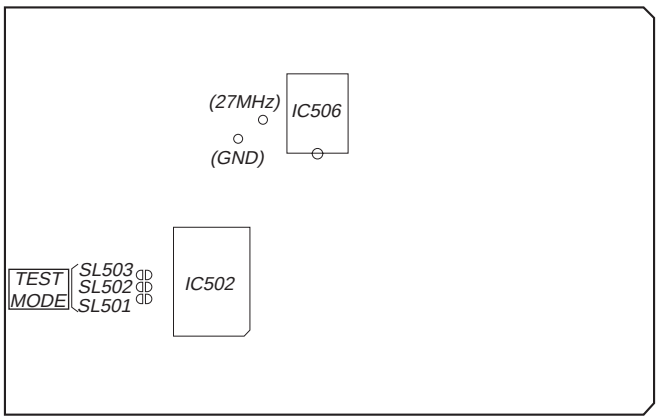


Adjustment Location :

[VIDEO BOARD] – SIDE A –

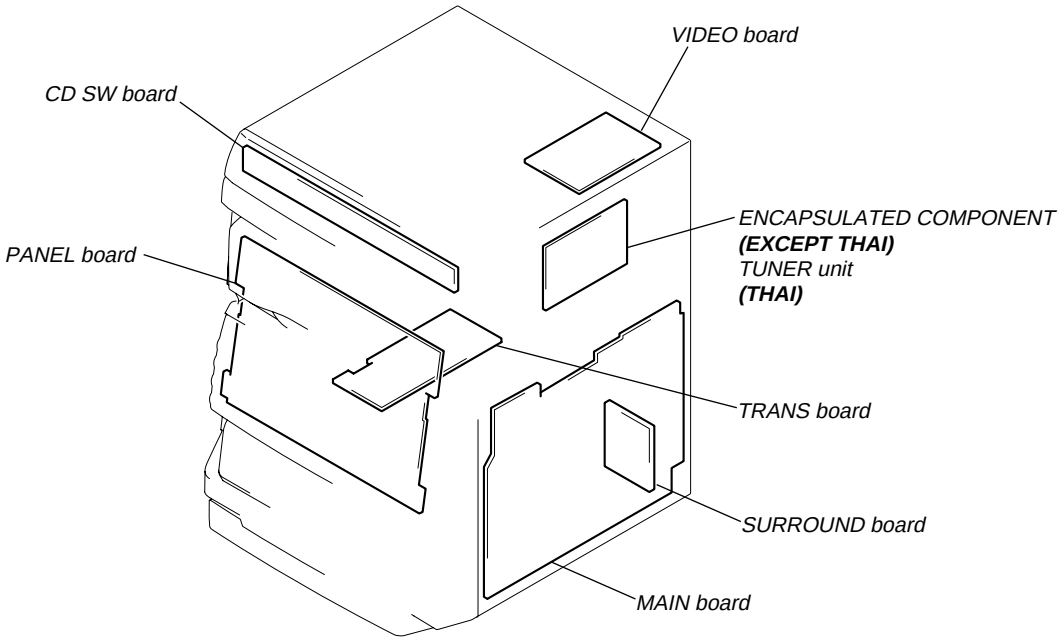


[VIDEO BOARD] – SIDE B –

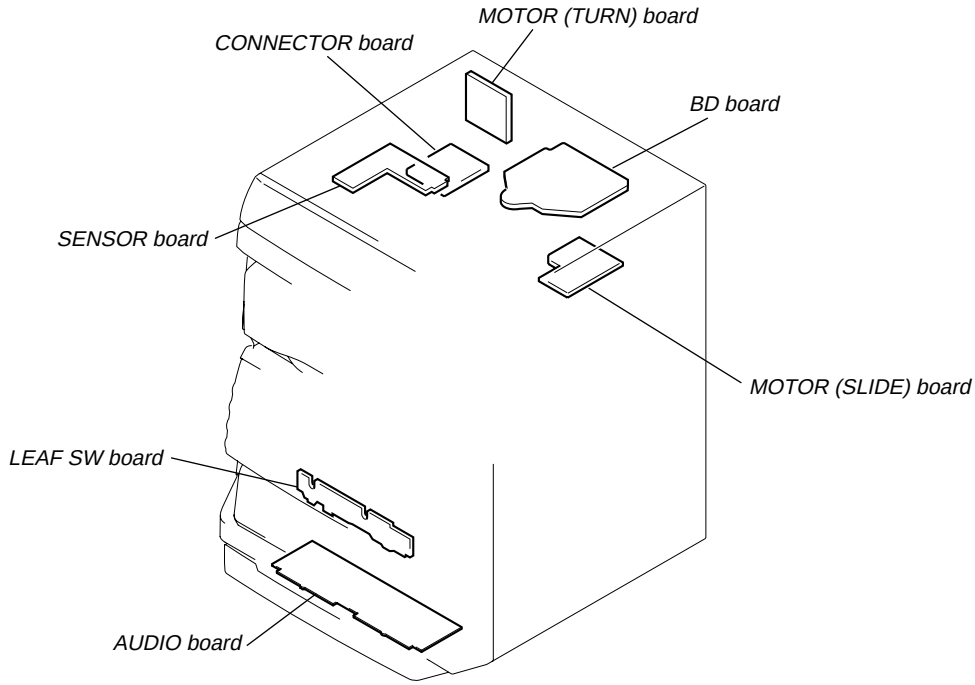


SECTION 8
DIAGRAMS

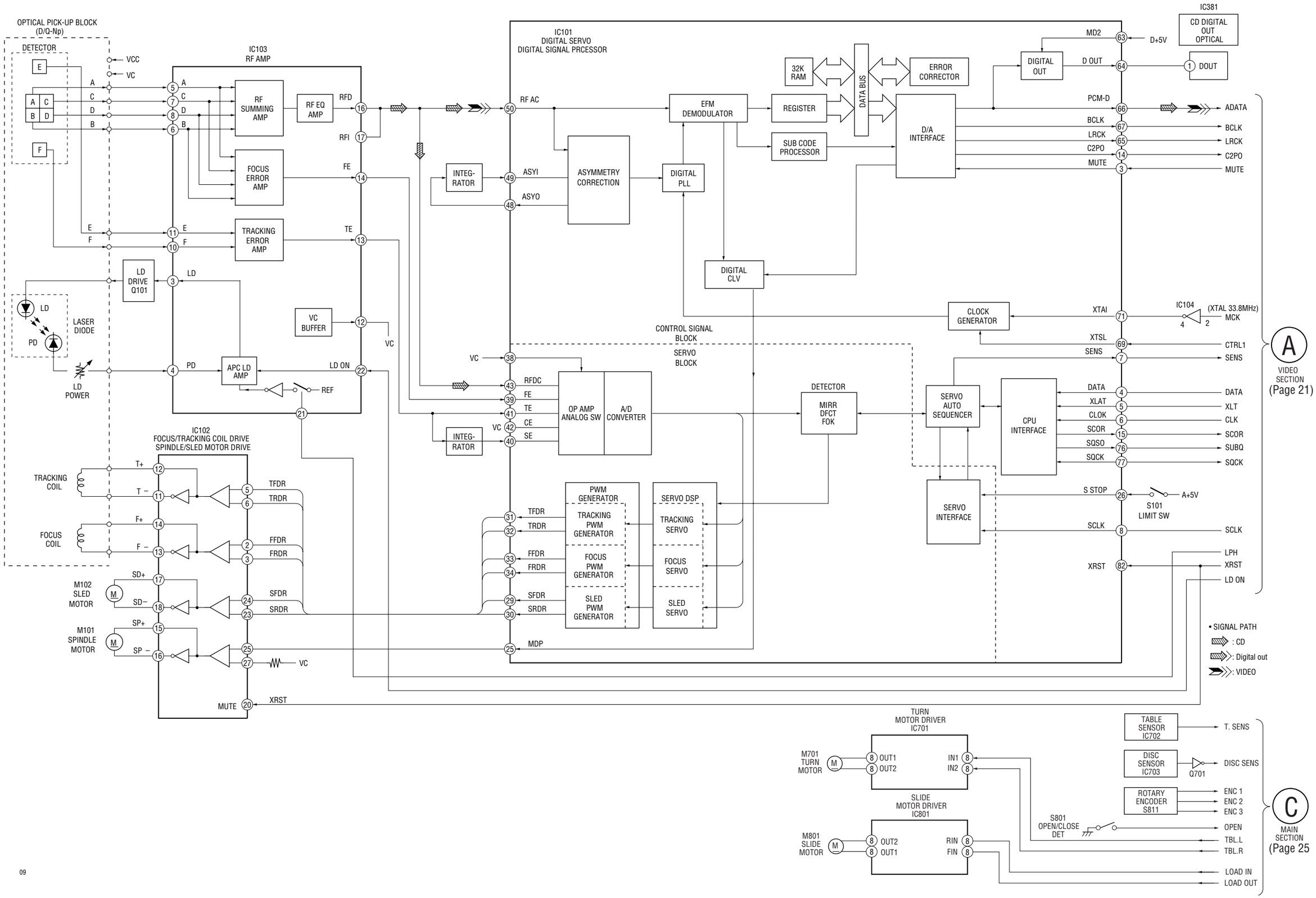
8-1. CIRCUIT BOARDS LOCATION



ENCAPSULATED COMPONENT/TUNER unit is supplied as the assembled block.

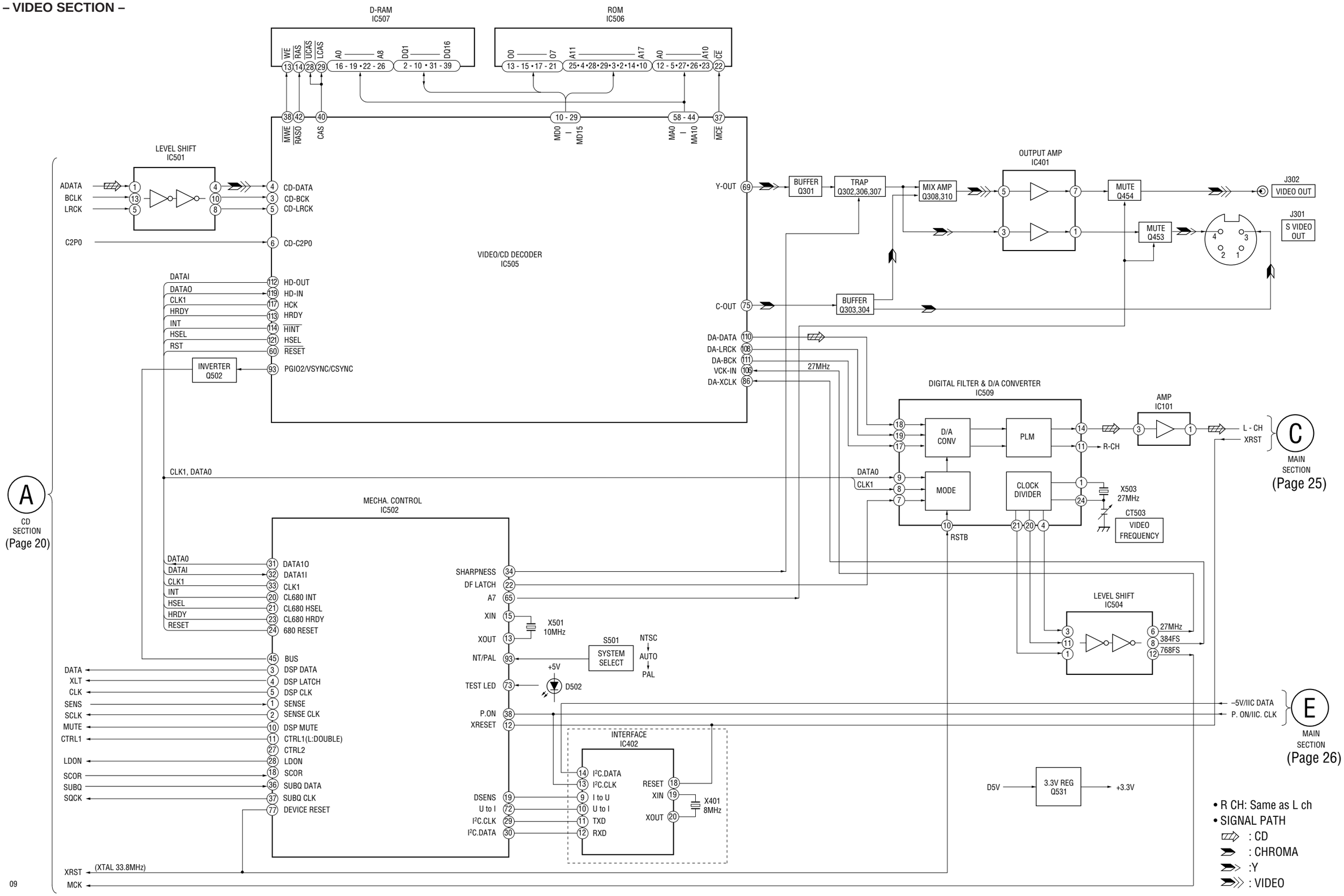


8-2. BLOCK DIAGRAMS
– CD SECTION –

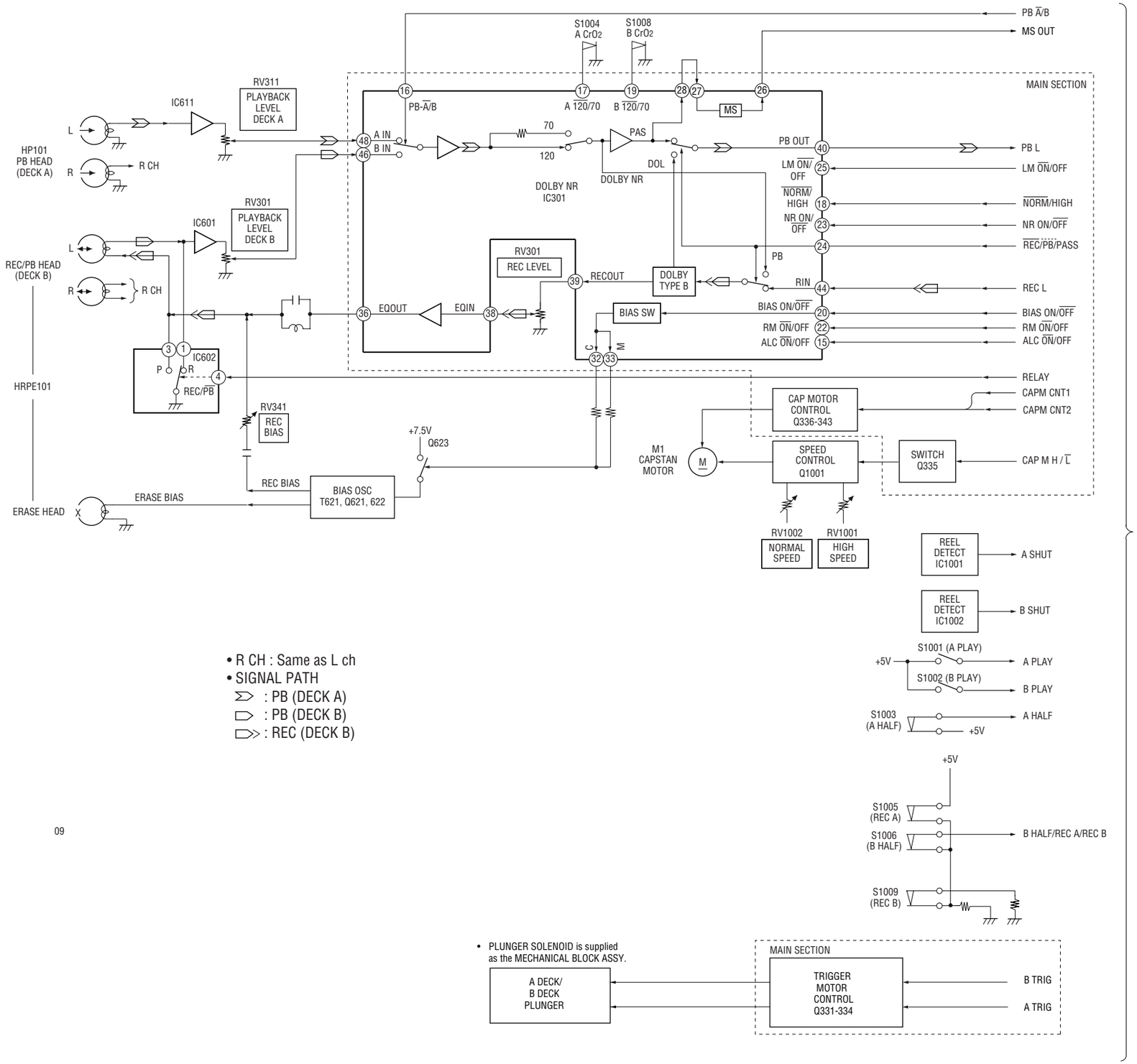


09

– VIDEO SECTION –



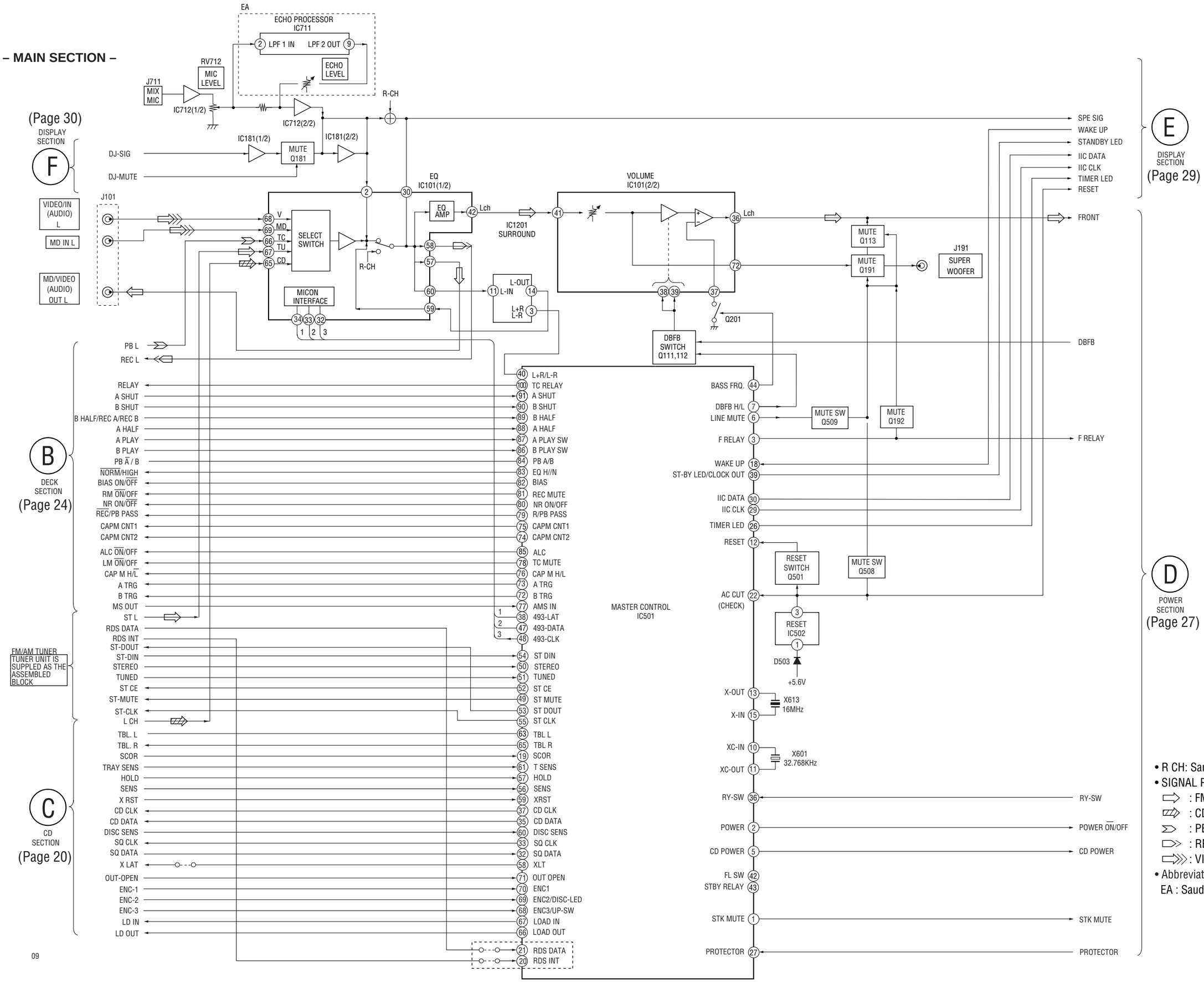
– DECK SECTION –



• R CH : Same as L ch
• SIGNAL PATH
: PB (DECK A)
: PB (DECK B)
: REC (DECK B)

09

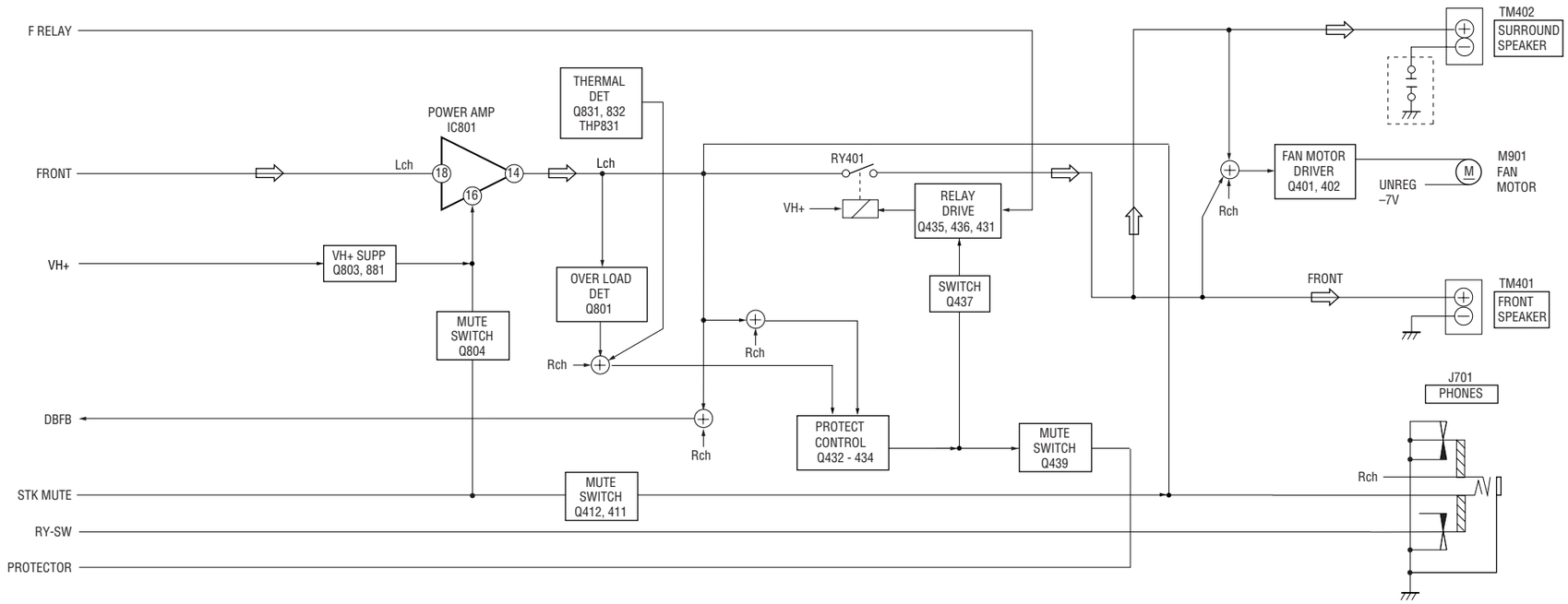
– MAIN SECTION –



- R CH: Same as L ch
- SIGNAL PATH
  - ⇨ : FM
  - ⇨ : CD
  - ⇨ : PB
  - ⇨ : REC
  - ⇨ : VIDEO/MD
- Abbreviation
  EA : Saudi Arabia model.

09

– POWER SECTION –

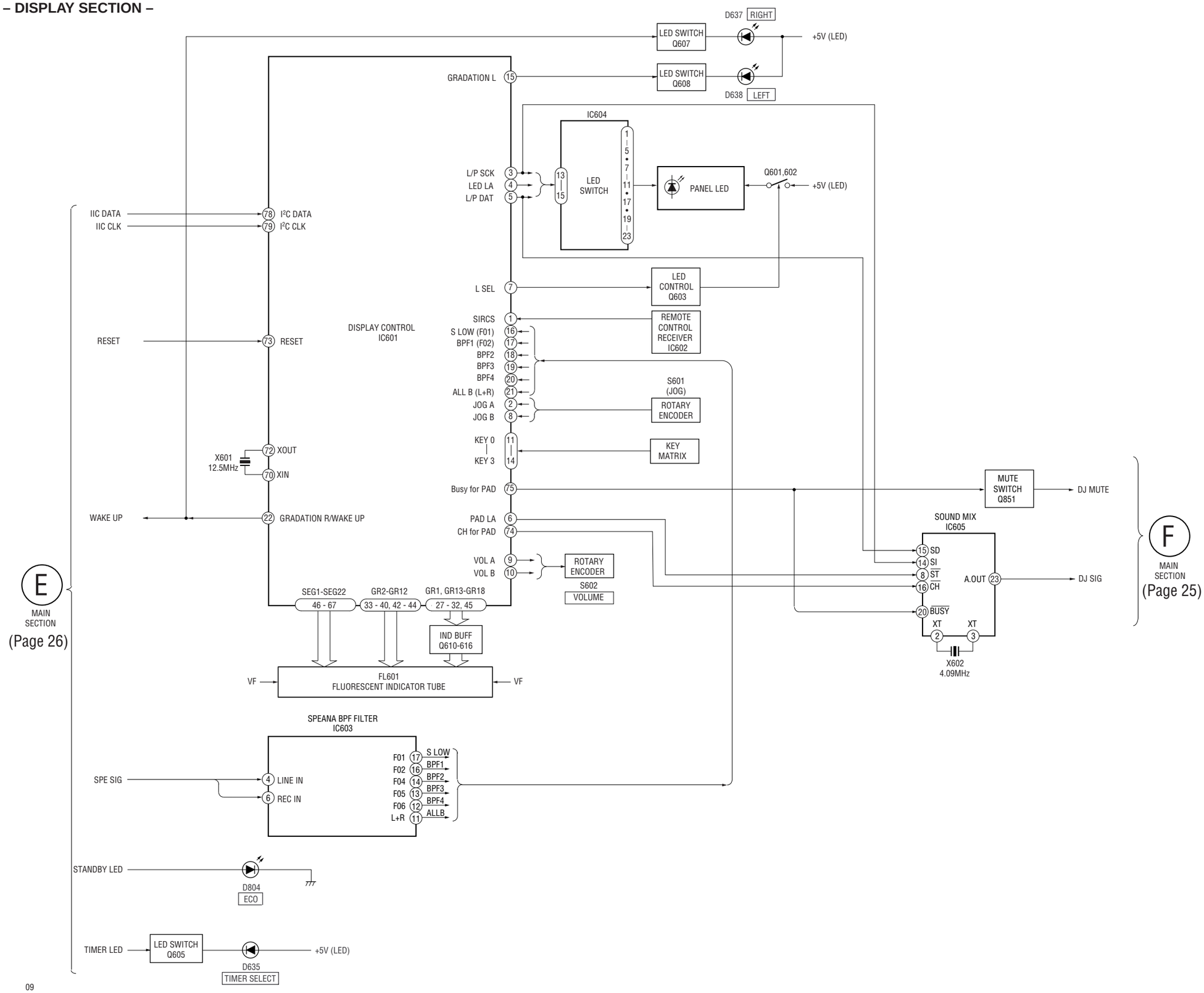


D
MAIN SECTION
(Page 26)

09

- R CH : Same as L ch
- SIGNAL PATH
  ⇨ : FM
- Abbreviation
  EA : Saudi Arabia model.
  SP : Singapore model.
  MY : Malaysia model.
  HK : Hong Kong model.
  TW : Taiwan model.
  IA : Indonesia model.

– DISPLAY SECTION –



09

THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : nonflammable resistor.
- : fusible resistor.
- : panel designation.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- B– : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : VIDEO/MD
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : CHROMA
  - : Y
  - : VIDEO
  - : CD
  - : digital out
- Abbreviation
  - EA : Saudi Arabia model.
  - SP : Singapore model.
  - MY : Malaysia model.
  - HK : Hong Kong model.
  - TW : Taiwan model.
  - IA : Indonesian model.
  - TH : Thai model.

For printed wiring boards.

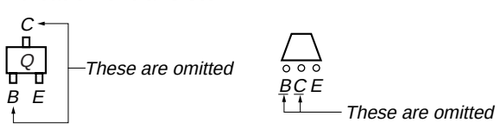
Note:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ○ : Through hole.
- ▒▒ : Pattern from the side which enables seeing.

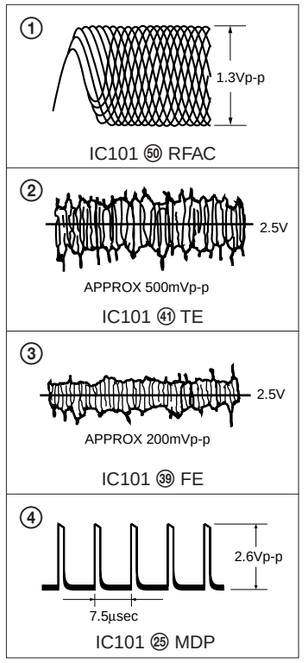
(The other layers' patterns are not indicated.)

Caution:
Pattern face side: (Side B) Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A) Parts on the parts face side seen from the parts face are indicated.

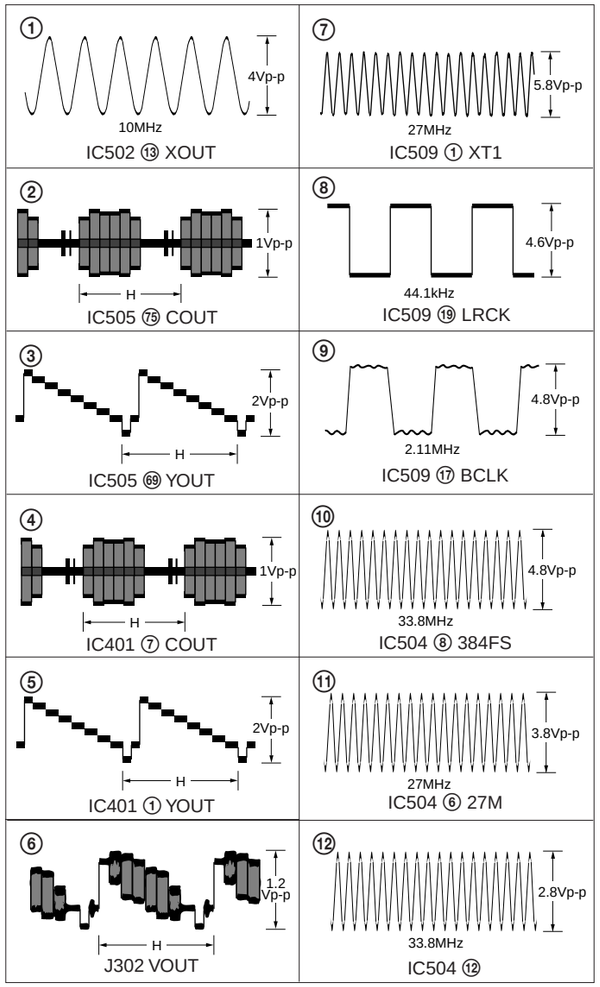
- **Indication of transistor**



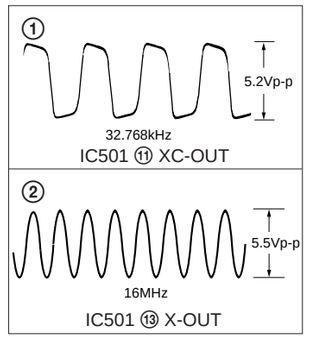
WAVEFORMS
– CD SECTION –



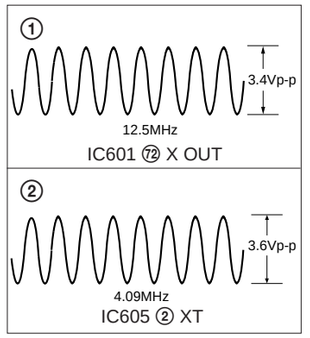
– VIDEO SECTION –



– MAIN (3/4) SECTION –

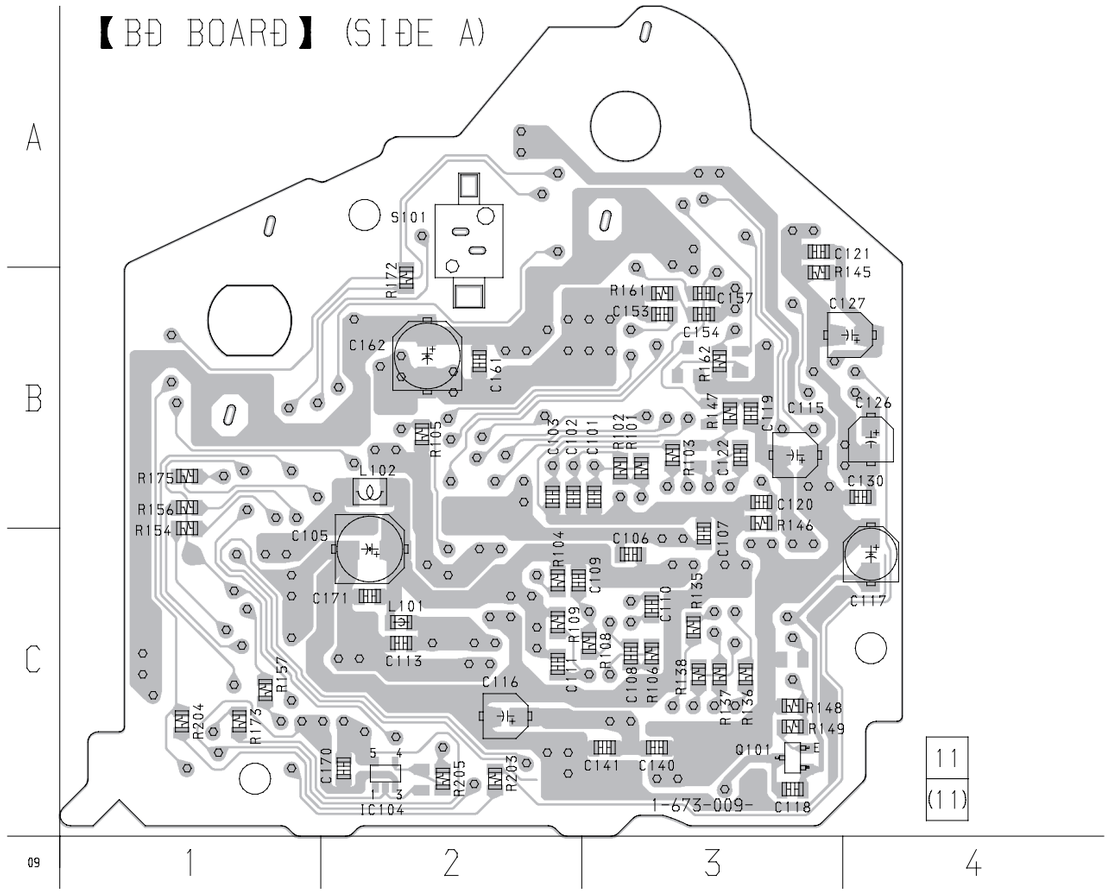


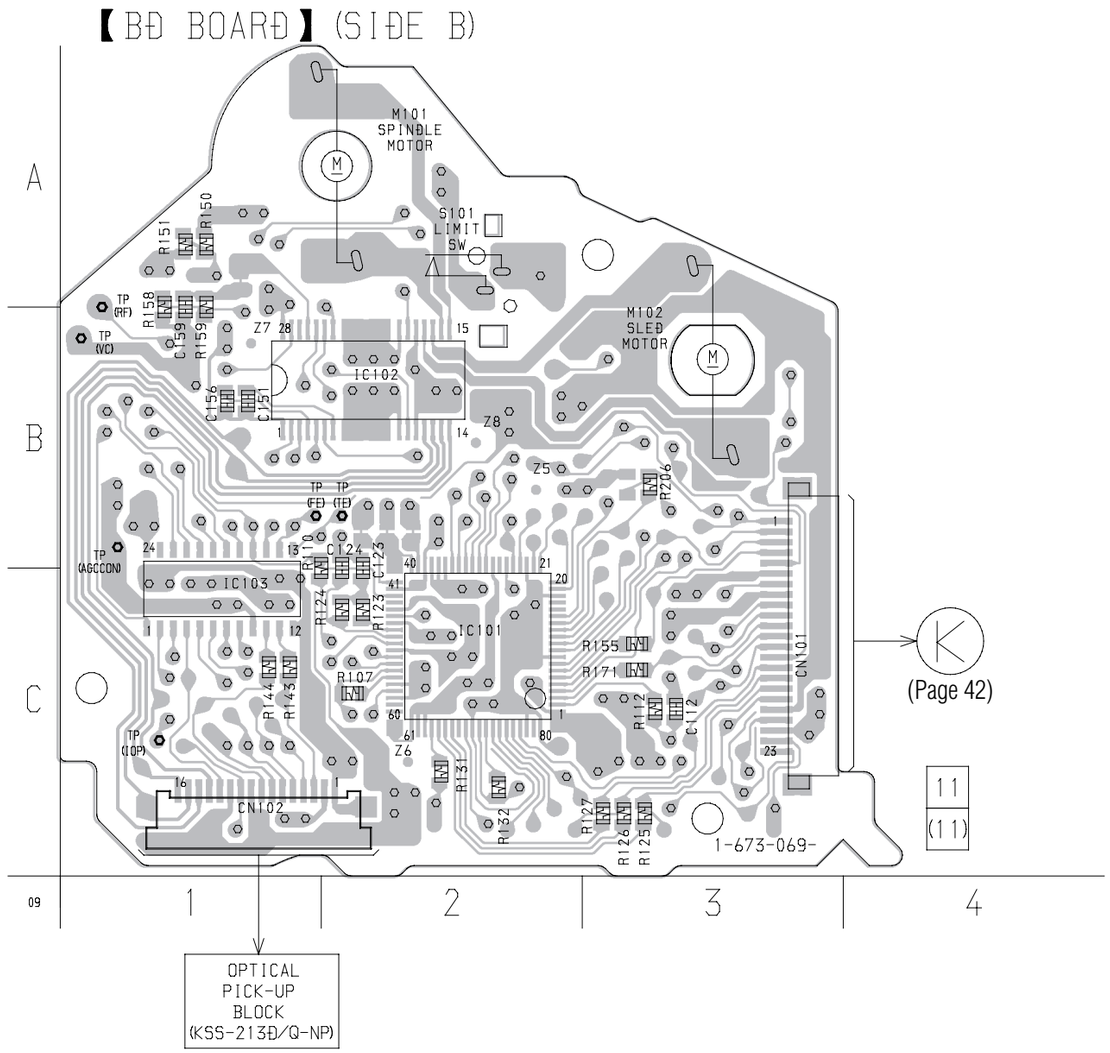
– PANEL (2/3) SECTION –



8-3. PRINTED WIRING BOARD – CD SECTION –

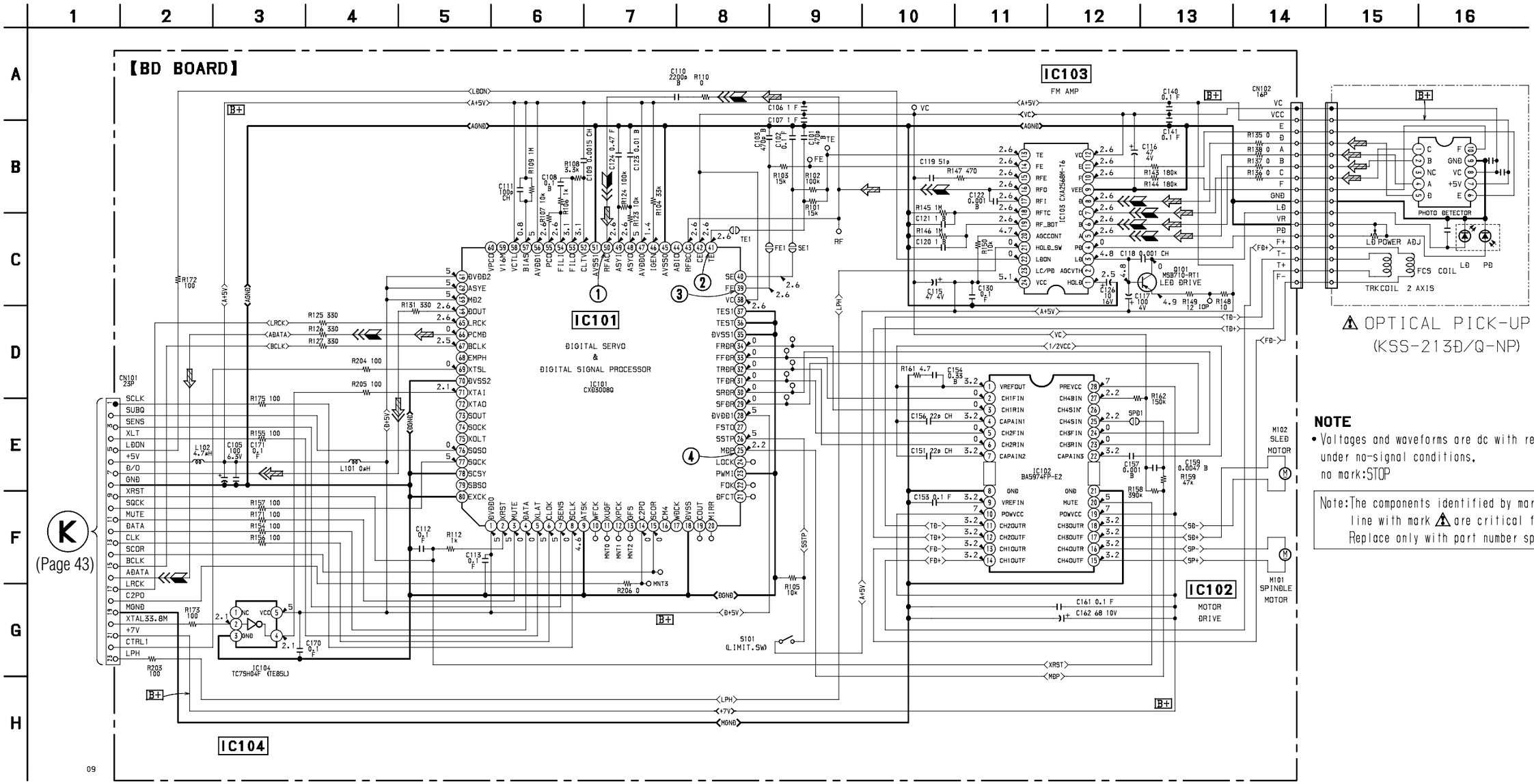
• See page 18 for Circuit Boards Location.





8-4. SCHEMATIC DIAGRAM – CD SECTION –

- See page 31 for Waveforms.
- See page 77 for IC Block Diagrams.
- See page 80 for IC Pin Functions.

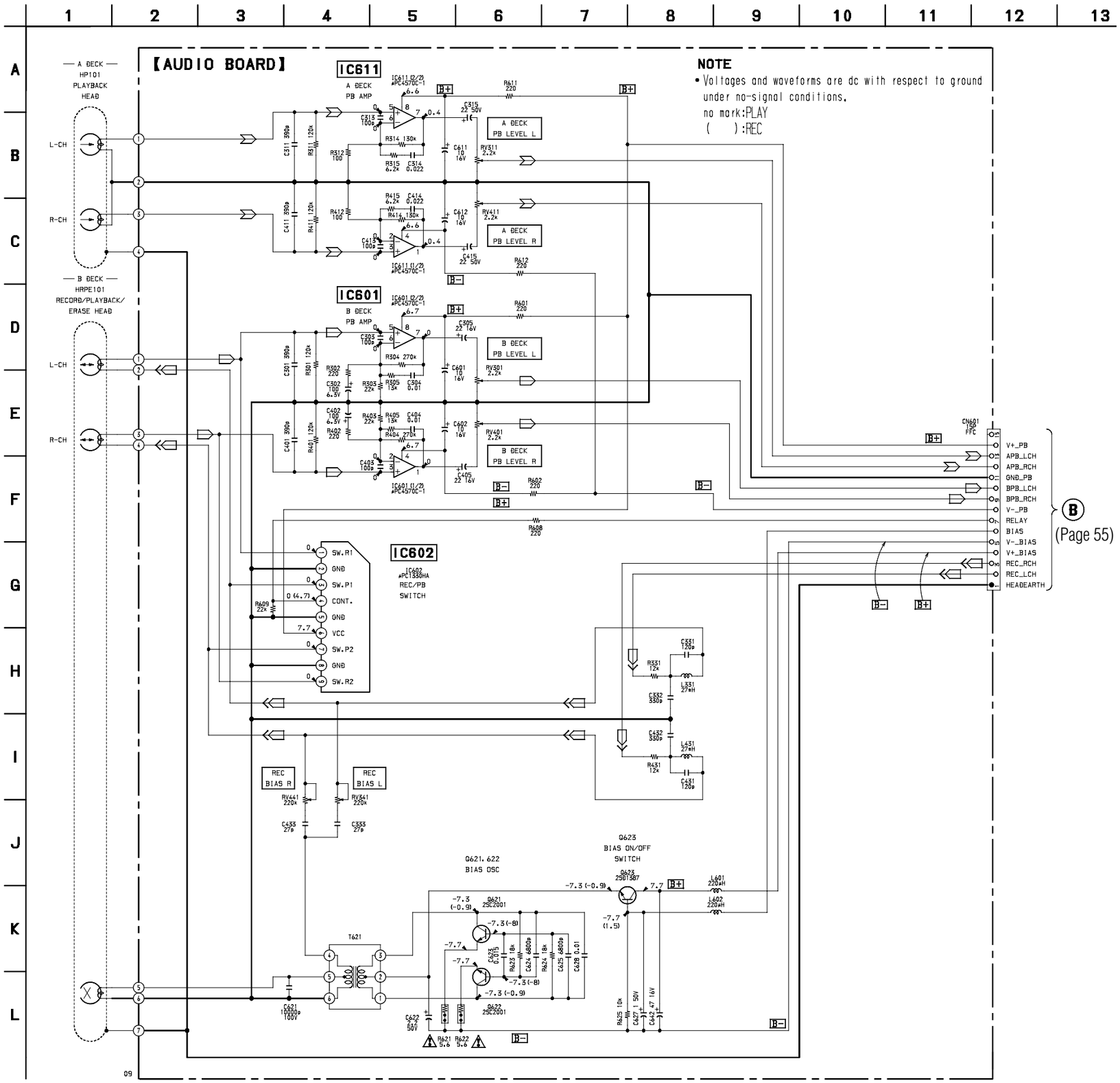


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:STOP

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

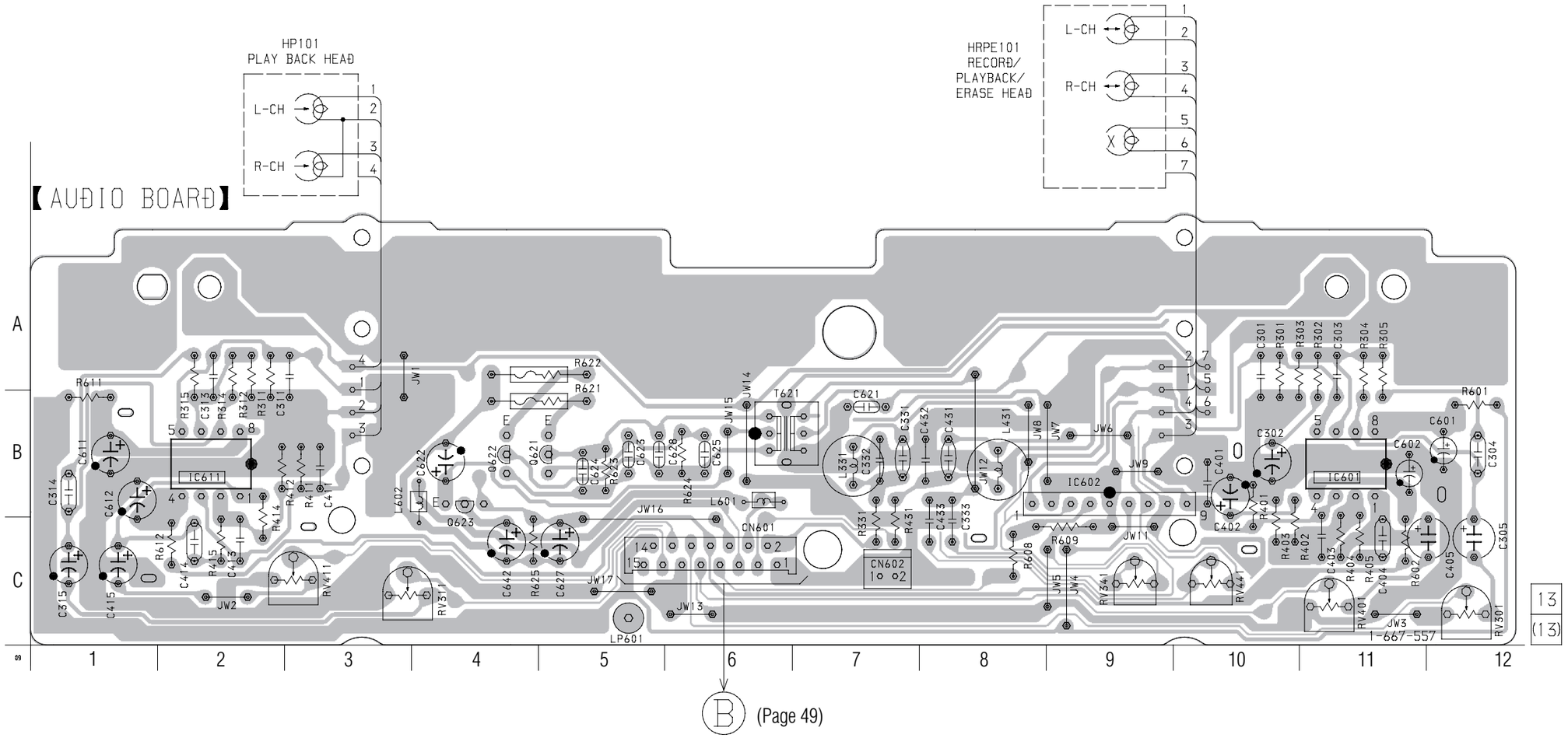
8-5. SCHEMATIC DIAGRAM – DECK SECTION –



Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

8-6. PRINTED WIRING BOARD – DECK SECTION –

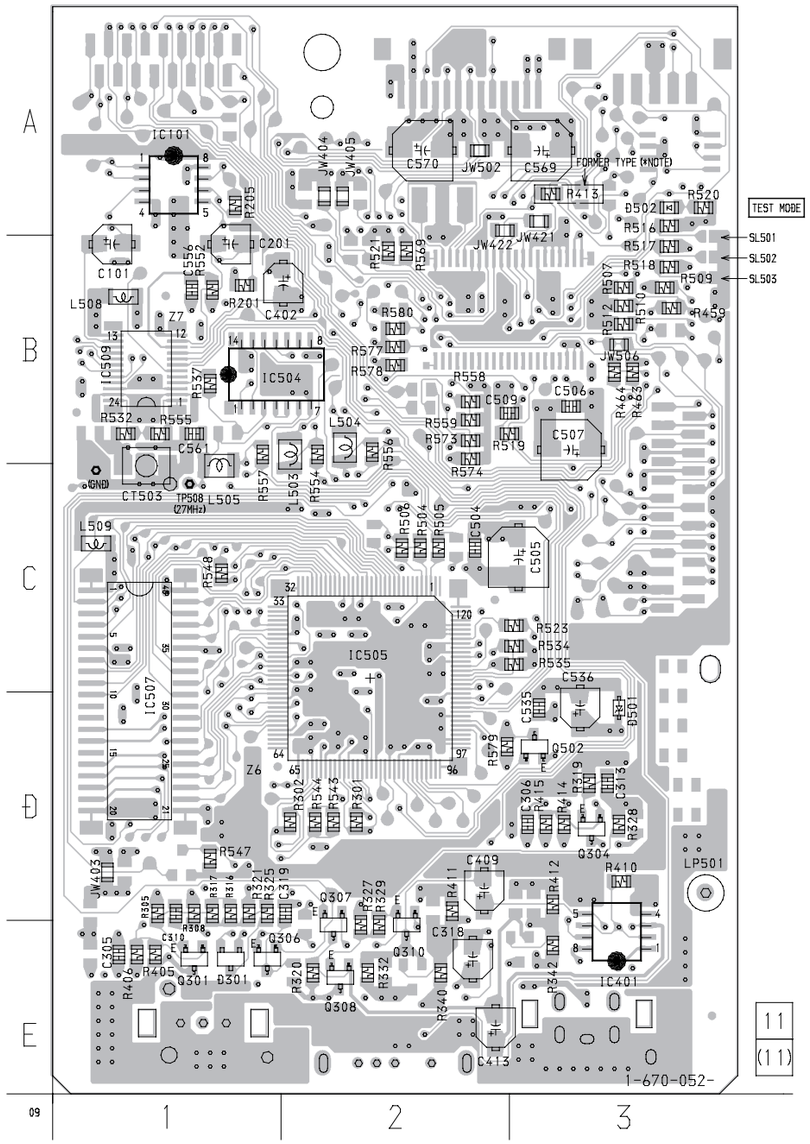
• See page 18 for Circuit Boards Location.



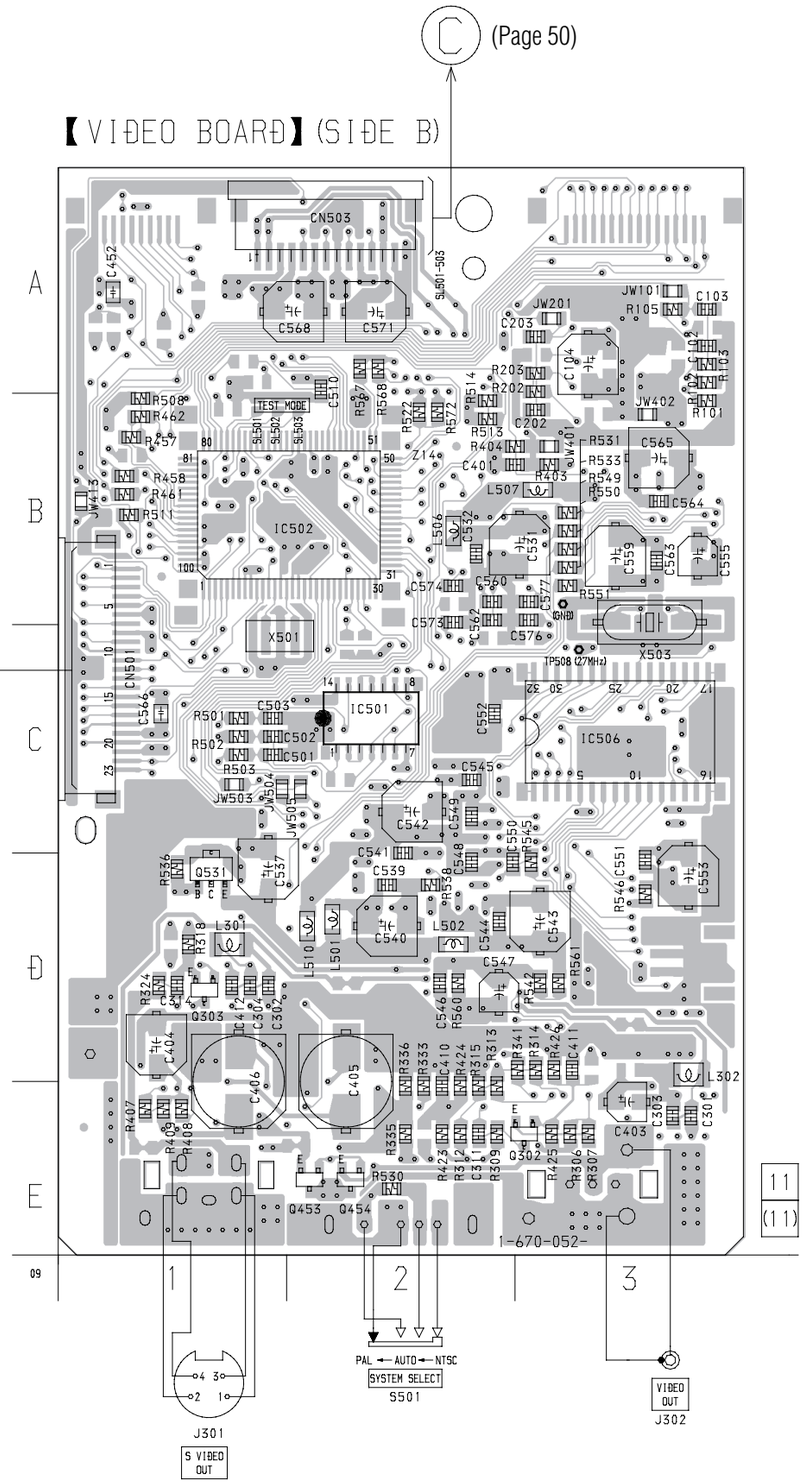
8-7. PRINTED WIRING BOARD – VIDEO SECTION –

• See page 18 for Circuit Boards Location.

【VIDEO BOARD】(SIDE A)



【VIDEO BOARD】(SIDE B)



(C) (Page 50)

(K) (Page 34)

• **Semiconductor Location**

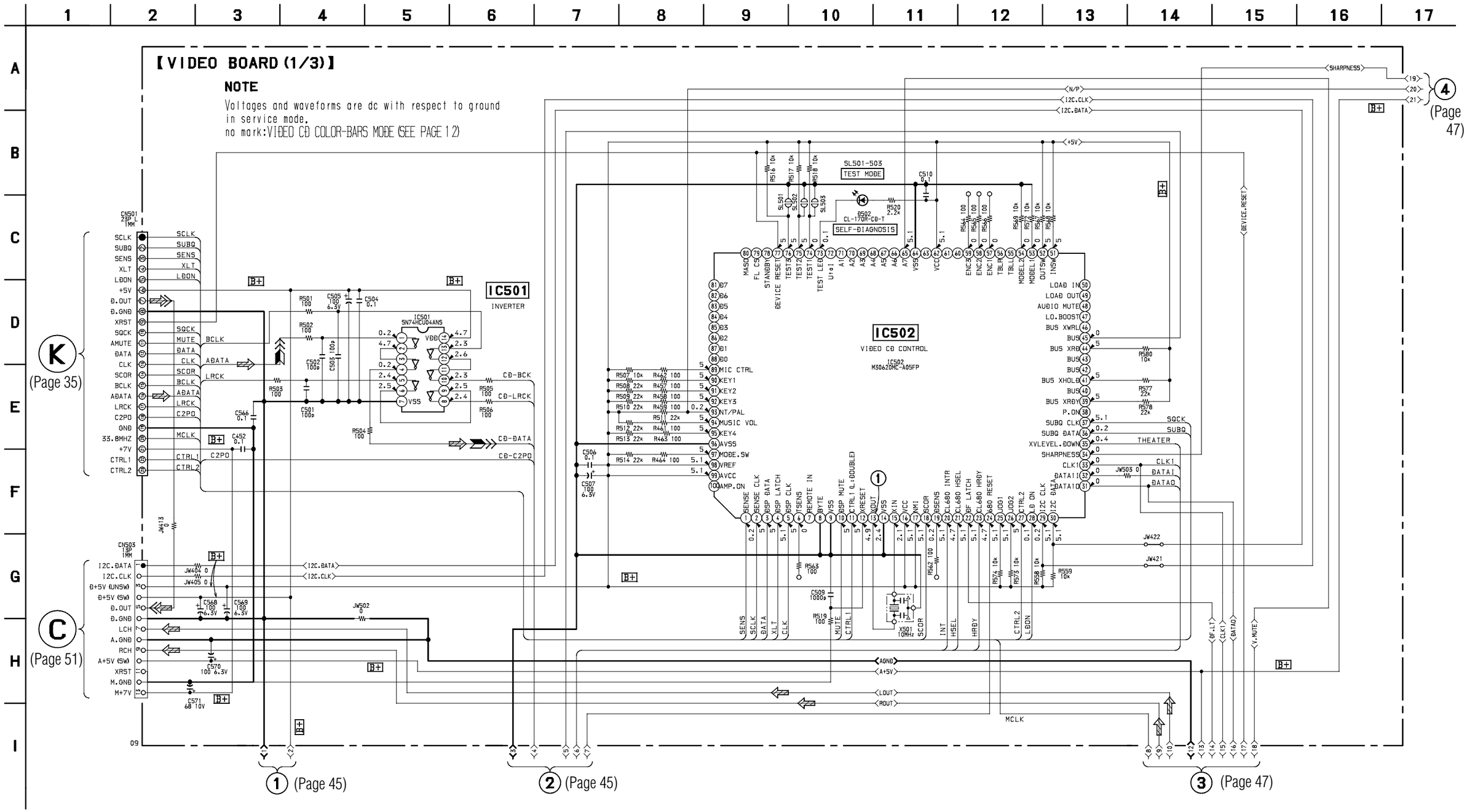
Ref. No.	Location
D301	E-1
D501	D-3
D502	A-3
IC101	A-1
IC401	E-3
IC504	A-1
IC505	C-2
IC507	C-1
IC509	B-1
Q301	E-1
Q304	D-3
Q306	E-1
Q307	E-2
Q308	E-2
Q310	E-2
Q502	D-3

• **Semiconductor Location**

Ref. No.	Location
IC501	C-2
IC502	B-1
IC506	C-3
Q302	E-3
Q303	D-1
Q453	E-2
Q454	E-2
Q531	D-1

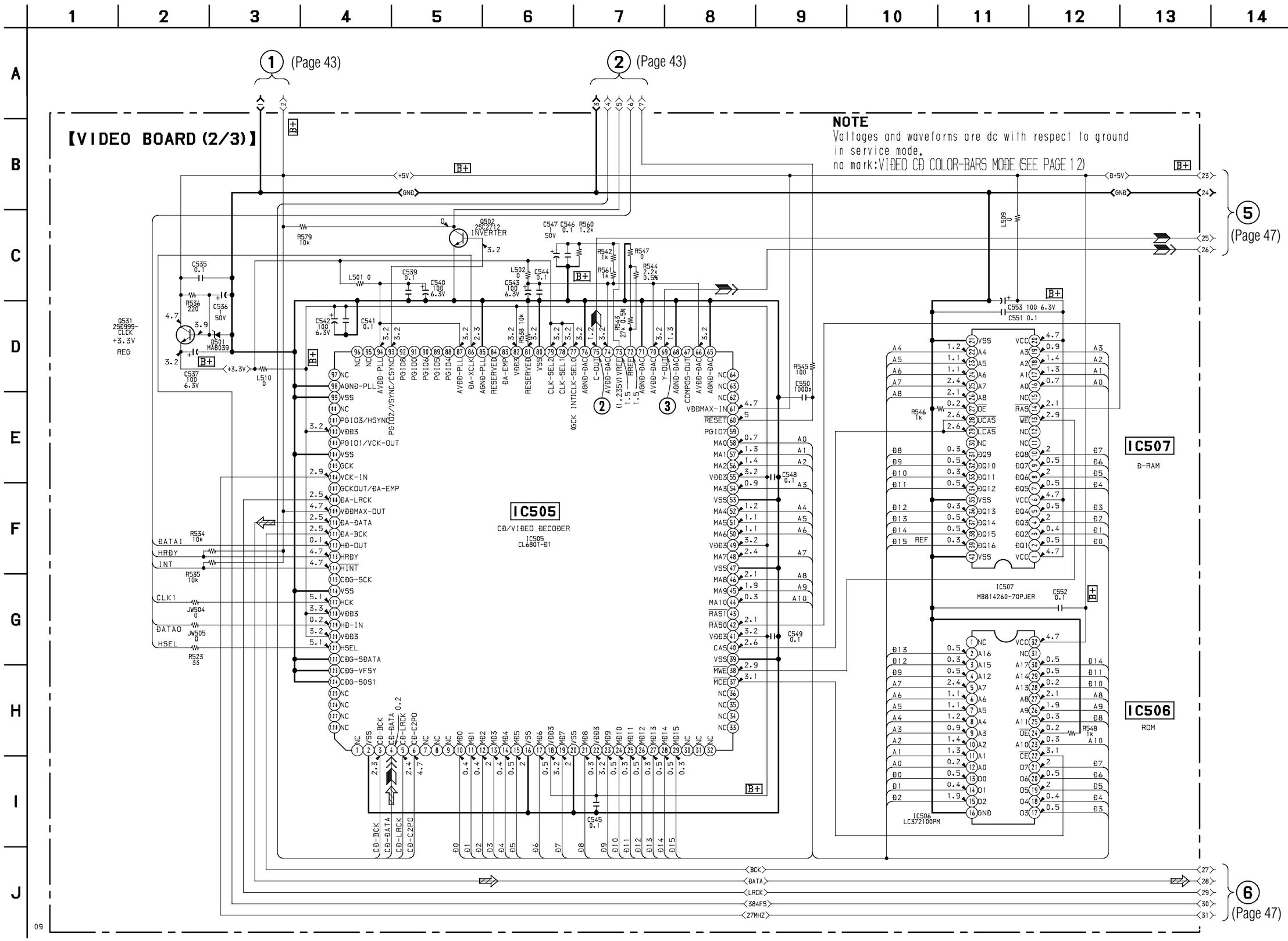
8-8. SCHEMATIC DIAGRAM – VIDEO (1/3) SECTION –

- See page 32 for Waveforms.
- See page 82 for IC Pin Functions.



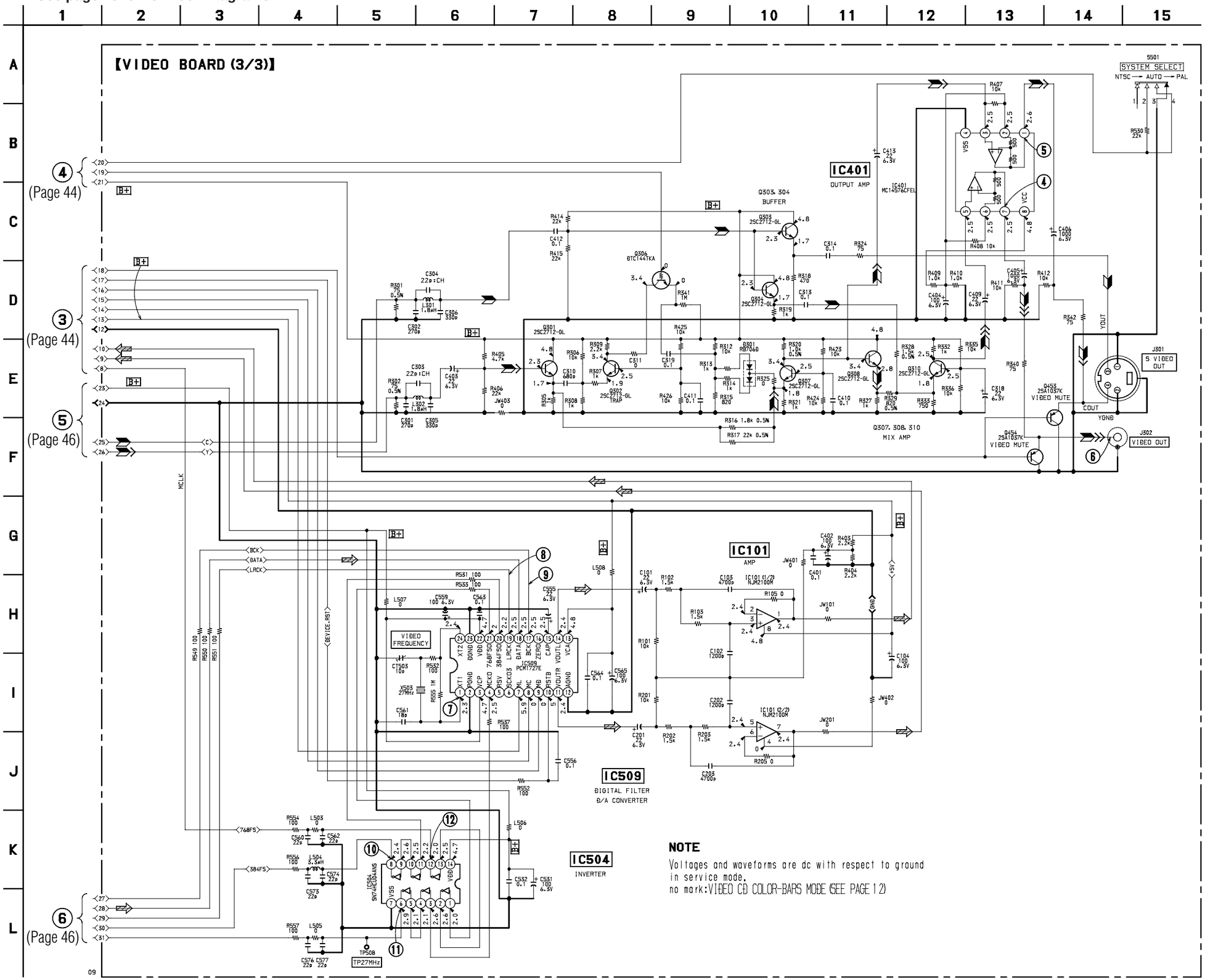
8-9. SCHEMATIC DIAGRAM – VIDEO (2/3) SECTION –

- **See page 31 for Waveforms.**
- **See page 84 for IC Pin Functions.**



8-10. SCHEMATIC DIAGRAM – VIDEO (3/3) SECTION –

- See page 32 for Waveforms.
- See page 78 for IC Block Diagrams.



NOTE

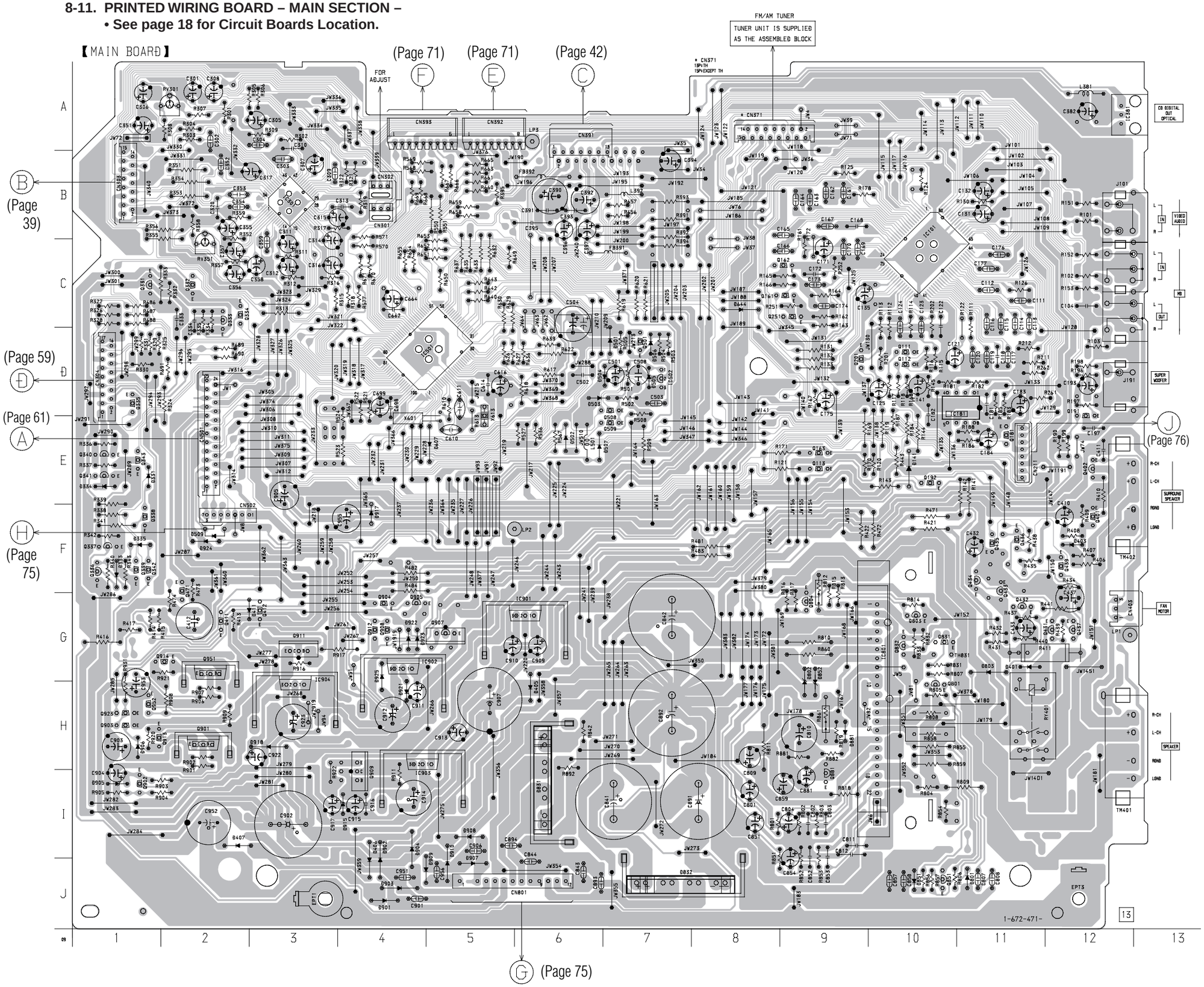
Voltages and waveforms are dc with respect to ground in service mode.
no mark:VIDEO CD COLOR-BARS MODE (SEE PAGE 12)

8-11. PRINTED WIRING BOARD – MAIN SECTION –

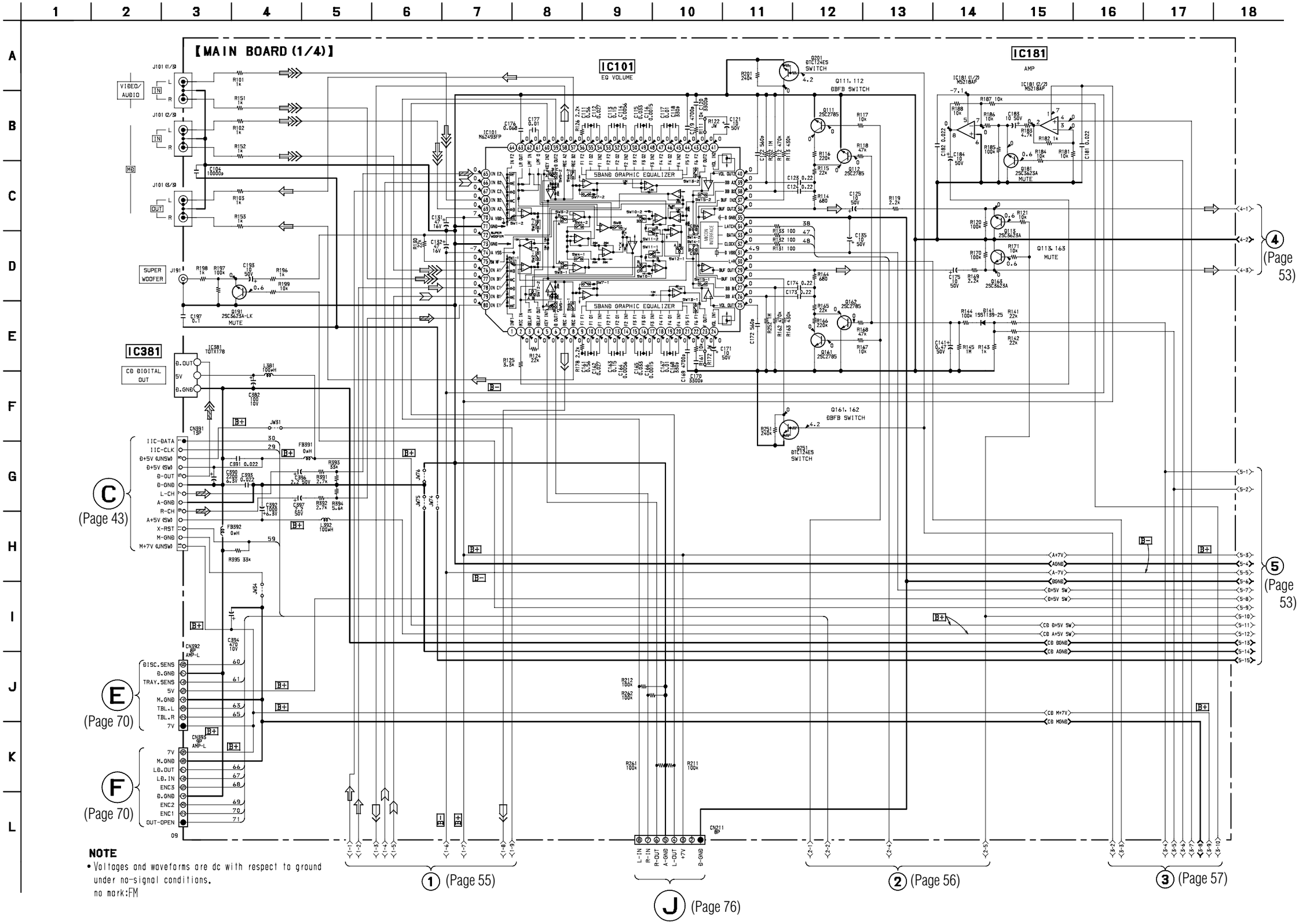
• See page 18 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D141	E-10	Q113	E-9
D191	E-10	Q161	C-9
D331	E-1	Q162	C-9
D334	E-1	Q163	E-9
D335	F-1	Q181	E-11
D401	G-11	Q191	E-10
D403	F-12	Q192	E-10
D405	H-6	Q201	D-9
D406	I-4	Q251	C-9
D407	I-2	Q331	C-1
D411	G-3	Q332	C-2
D501	D-7	Q333	C-2
D502	E-6	Q334	C-2
D503	D-6	Q335	D-1
D504	D-7	Q336	F-1
D505	D-7	Q337	F-1
D506	D-7	Q338	F-1
D507	E-6	Q339	F-1
D509	F-2	Q340	E-1
D607	E-5	Q341	E-1
D644	C-8	Q342	E-1
D801	J-11	Q343	E-1
D802	G-9	Q401	F-12
D803	G-11	Q402	E-12
D831	I-6	Q411	G-2
D832	J-7	Q412	G-2
D851	J-10	Q431	G-12
D852	G-9	Q432	G-11
D881	H-9	Q433	F-11
D901	J-4	Q434	F-11
D902	I-4	Q435	F-11
D903	J-4	Q436	F-11
D904	I-4	Q437	G-12
D905	I-1	Q439	F-12
D906	H-1	Q471	F-12
D907	J-5	Q501	D-7
D908	I-5	Q508	D-7
D909	J-5	Q509	E-7
D910	J-5	Q801	H-10
D915	I-4	Q803	G-10
D921	H-4	Q804	G-9
D922	G-4	Q831	G-10
D923	G-4	Q832	G-10
D924	F-2	Q851	J-11
D925	G4	Q881	I-9
		Q901	H-2
IC101	B-10	Q902	I-1
IC181	D-11	Q903	H-1
IC301	B-3	Q904	G-4
IC381	A-12	Q905	G-4
IC501	D-5	Q907	G-5
IC502	D-7	Q908	G-4
IC801	G-10	Q909	I-4
IC901	G-6	Q911	G-3
IC902	G-4	Q913	H-1
IC903	I-4	Q914	G-2
IC904	H-3	Q923	H-1
		Q951	G-2
Q111	D-10	Q952	H-1
Q112	D-10		



8-12. SCHEMATIC DIAGRAM – MAIN (1/4) SECTION –



8-13. SCHEMATIC DIAGRAM – MAIN (2/4) SECTION –

• See page 49 for Printed Wiring Board.

【MAIN BOARD (2/4)】

NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:FM

IC801
POWER AMP

IC801 (1/2)
STK411-240E

IC801 (2/2)
STK411-240E

Q804
MUTE SWITCH

Q801, 805
OVER LOAD DET

Q832
THERMAL DET

Q192
MUTE

Q401, 402
FAN MOTOR DRIVER

PROTECTOR

Q431, 435, 436
RELAY DRIVE

Q432-434
PROTECT CONTROL

Q437
SWITCH

Q439
SWITCH

TM401
SPEAKER
L-CH
LGND
RGND
R-CH

SURROUND SPEAKER
L-CH
LGND
RGND
R-CH

TM402

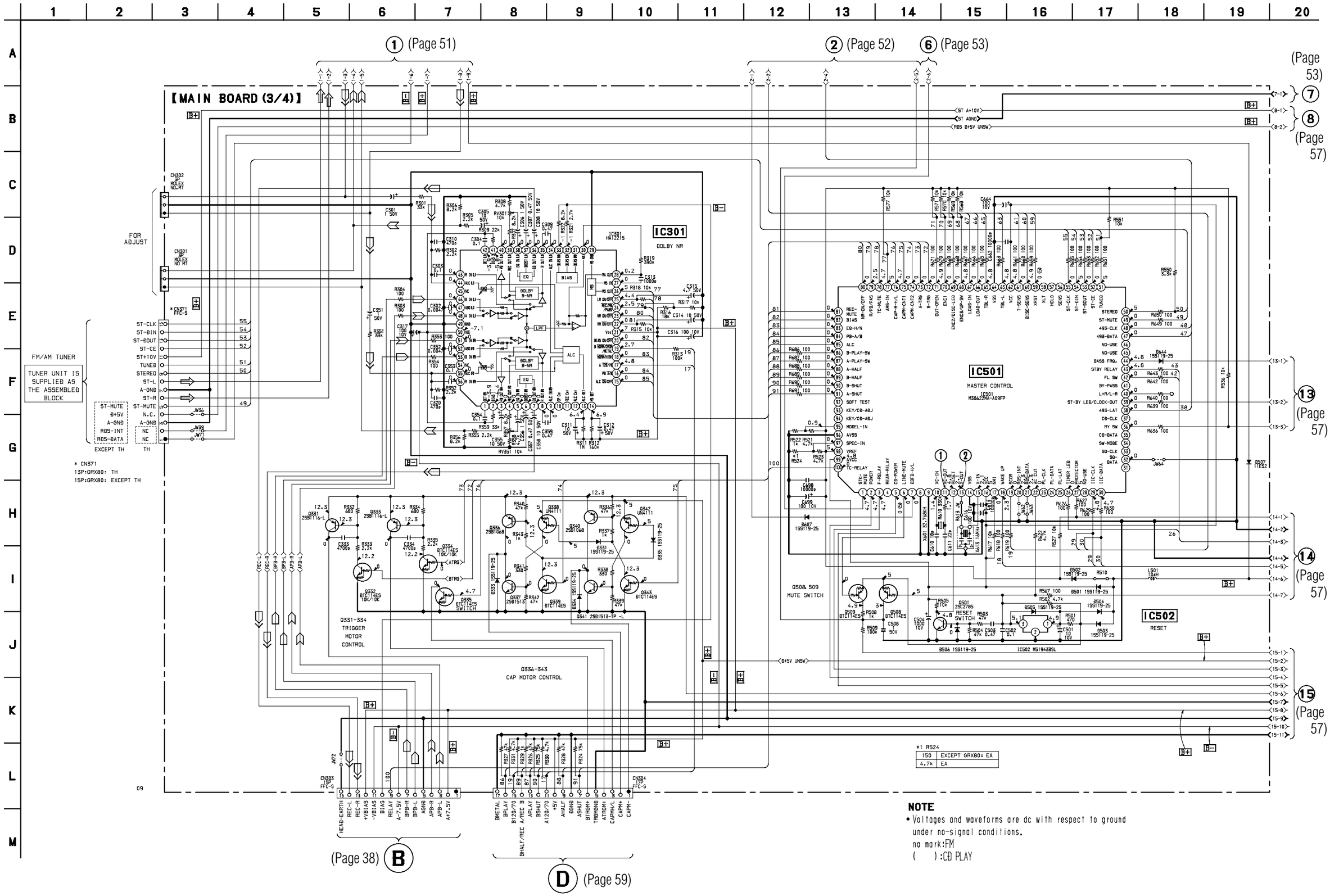
CN801
SCN
GND
AC2
AC2
GND
GND
AC1
AC1
AC3
GND
AC3
AC4
AC4

FAN-
FAN+

4 (Page 52)
6 (Page 56)
5 (Page 52)
7 (Page 56)
G (Page 73)
(Page 57) 9
10 (Page 57)
11 (Page 58)
12 (Page 58)

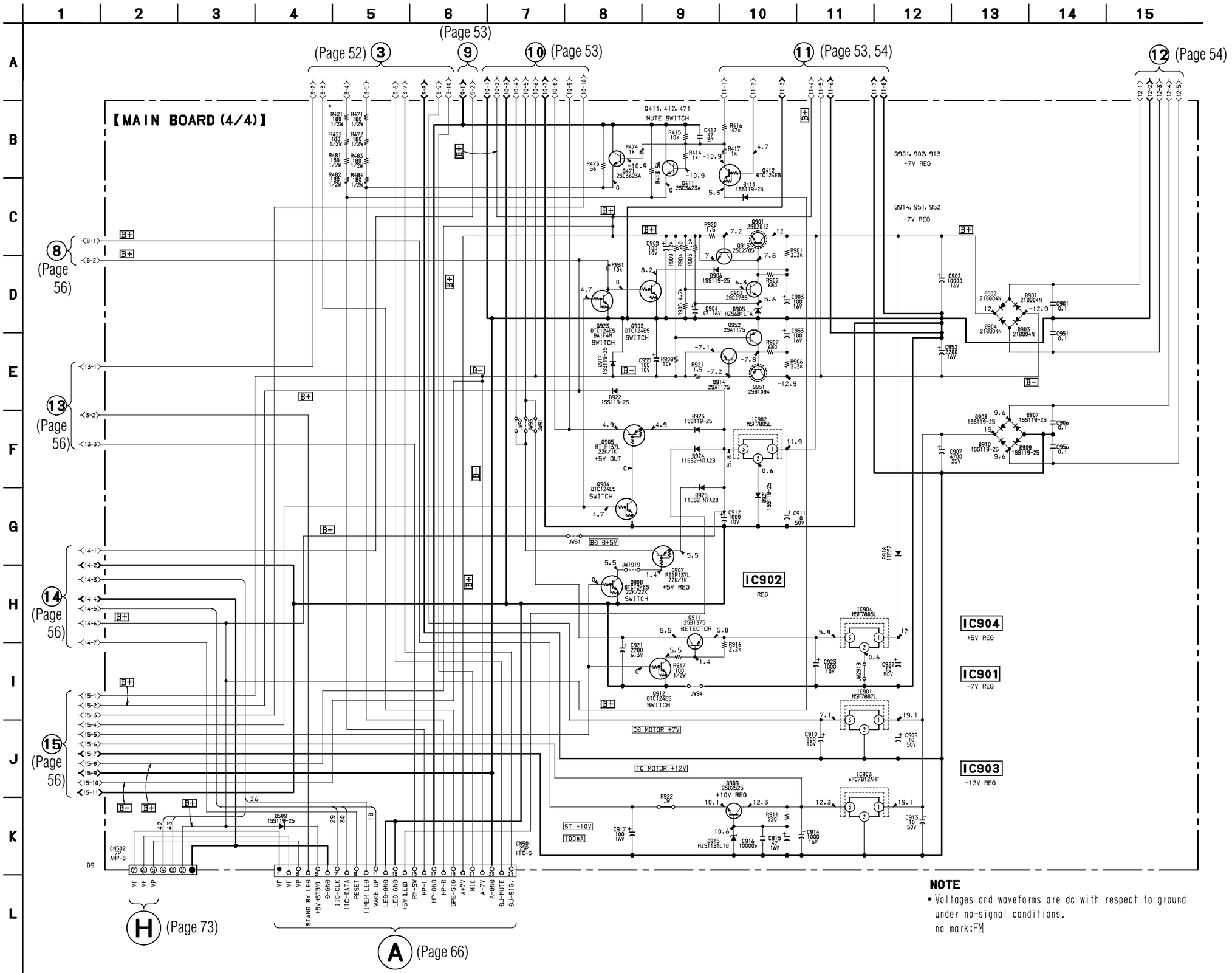
8-14. SCHEMATIC DIAGRAM – MAIN (3/4) SECTION –

- See page 32 for Waveforms.
- See page 49 for Printed Wiring Board.
- See page 87 for IC Pin Functions.



8-15. SCHEMATIC DIAGRAM – MAIN (4/4) SECTION –

• See page 49 for Printed Wiring Board.

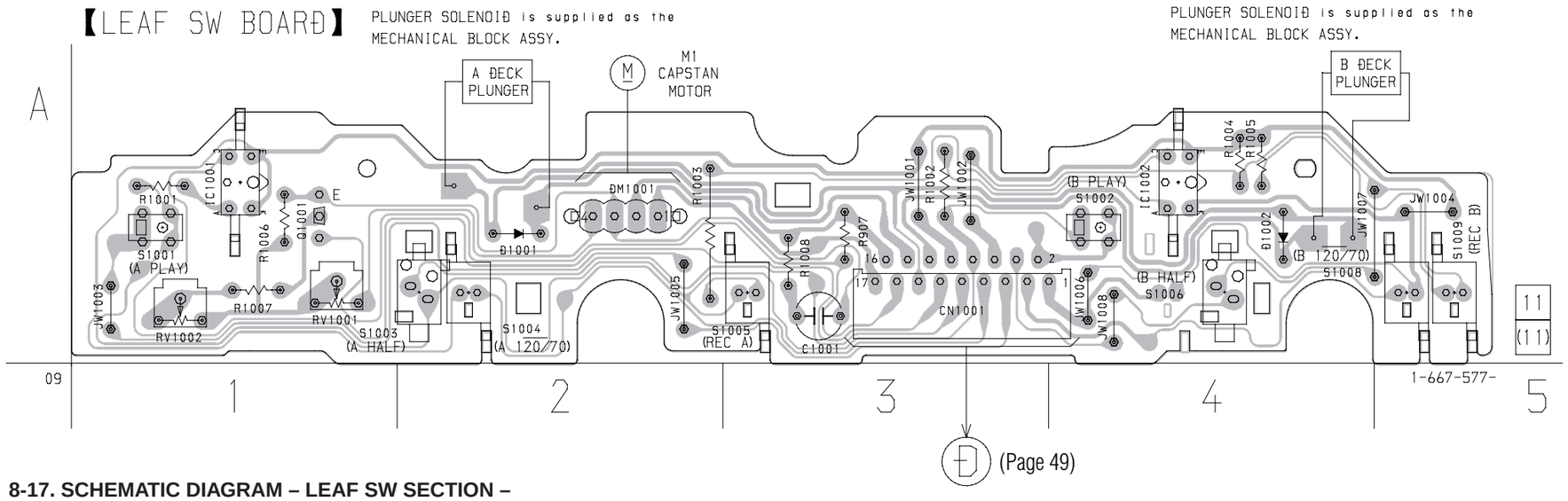


NOTE

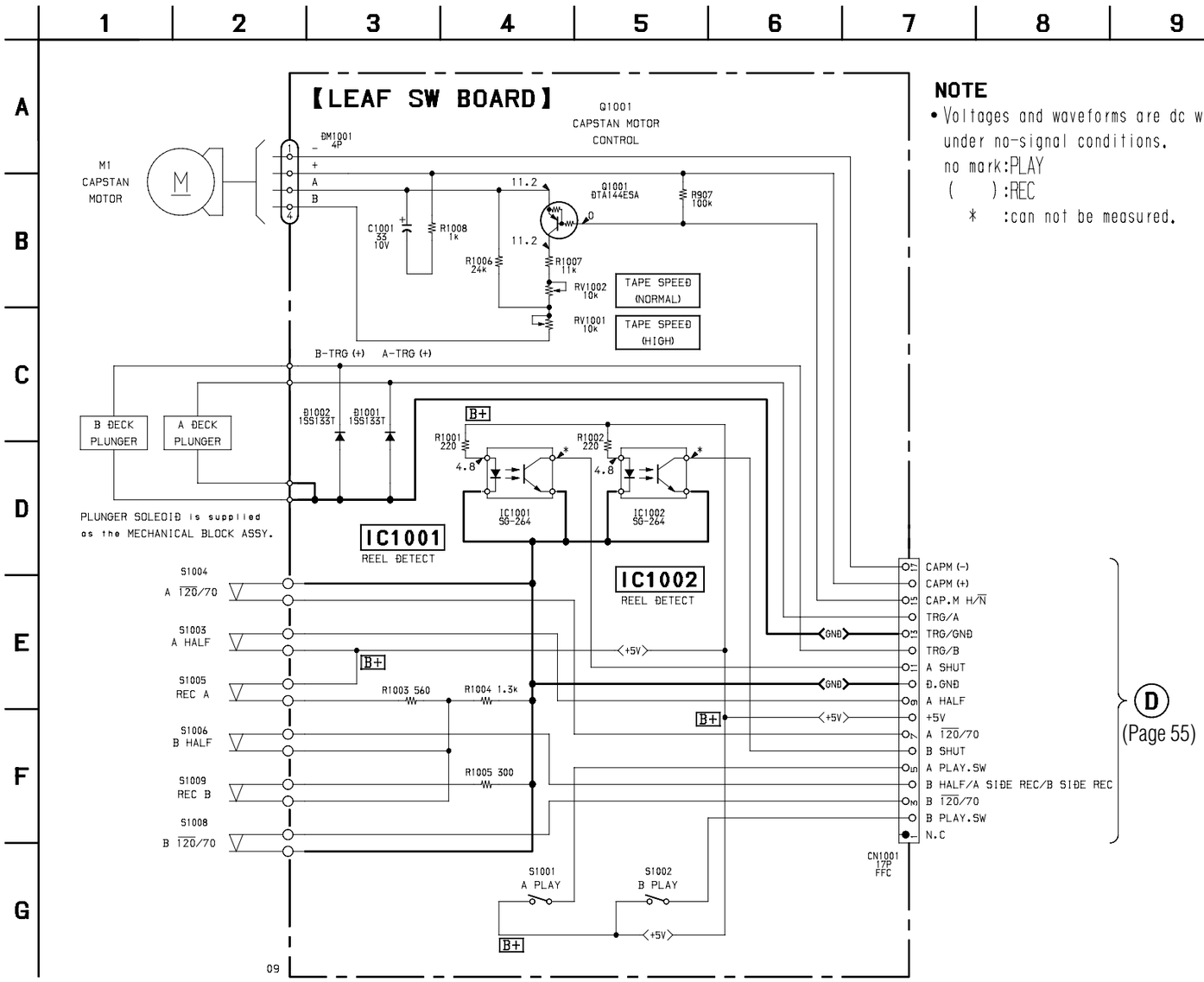
• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:FM

8-16. PRINTED WIRING BOARD – LEAF SW SECTION –

• See page 18 for Circuit Boards Location.



8-17. SCHEMATIC DIAGRAM – LEAF SW SECTION –



NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:PLAY
  ( ):REC
  * :can not be measured.

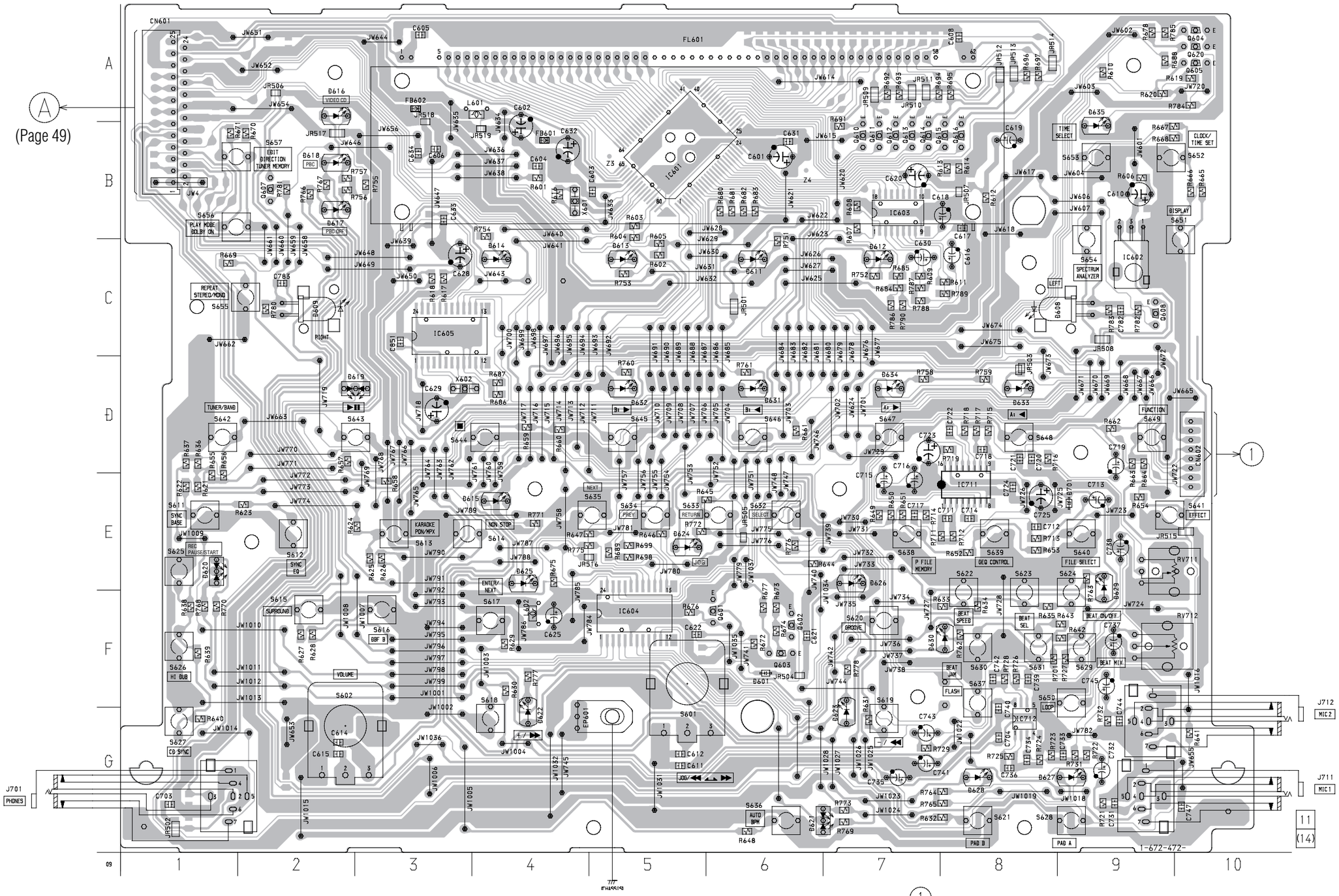
8-18. PRINTED WIRING BOARD – PANEL SECTION –

• See page 18 for Circuit Boards Location.

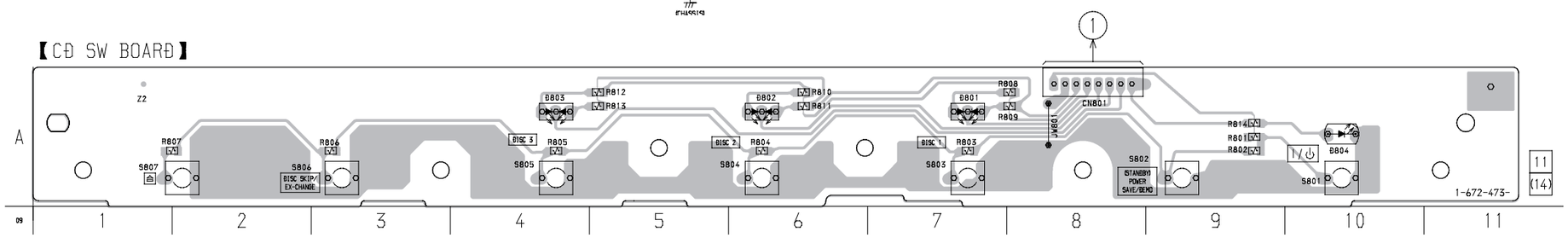
• **Semiconductor Location**

Ref. No.	Location
D601	F-6
D608	C-9
D609	C-2
D611	C-6
D612	C-7
D613	C-5
D614	C-4
D615	E-4
D616	A-2
D617	B-2
D618	B-2
D619	D-3
D620	E-1
D621	G-7
D622	G-4
D623	G-7
D624	E-5
D625	E-4
D626	E-7
D627	G-9
D628	G-8
D629	F-9
D630	F-8
D631	D-6
D632	D-5
D633	D-8
D634	D-7
D635	A-9
D701	E-9
IC601	B-5
IC602	C-9
IC603	B-7
IC604	F-5
IC605	C-4
IC711	E-8
IC712	G-8
Q601	F-6
Q602	F-6
Q603	F-6
Q604	A-10
Q605	A-10
Q607	B-2
Q608	C-9
Q610	B-7
Q611	B-7
Q612	B-7
Q613	B-7
Q614	B-7
Q615	B-8
Q616	B-8
Q620	A-10

【PANEL BOARD】

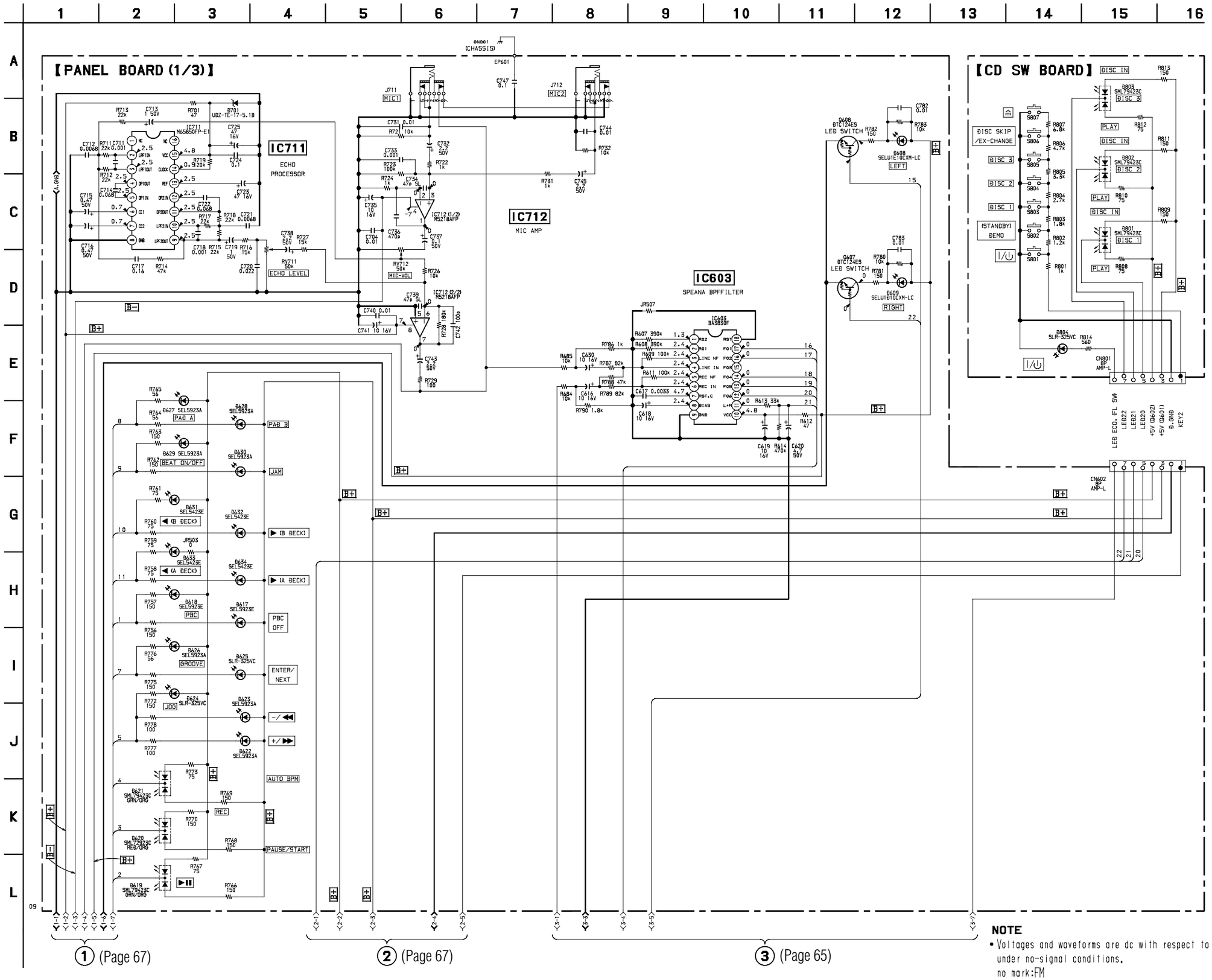


【CD SW BOARD】



8-19. SCHEMATIC DIAGRAM – PANEL (1/3) SECTION –

• See page 77 for IC Block Diagrams.

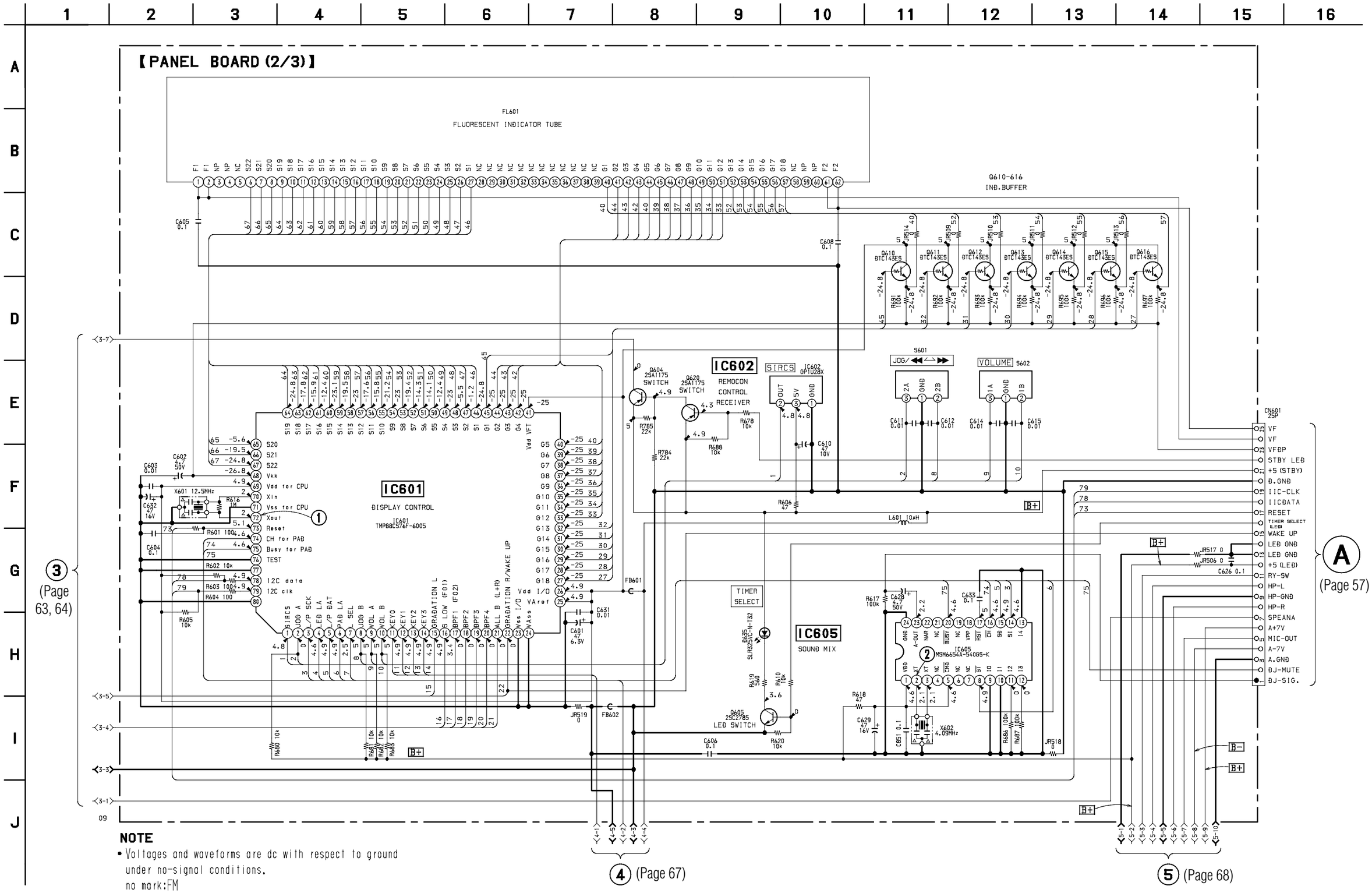


NOTE

• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark:FM

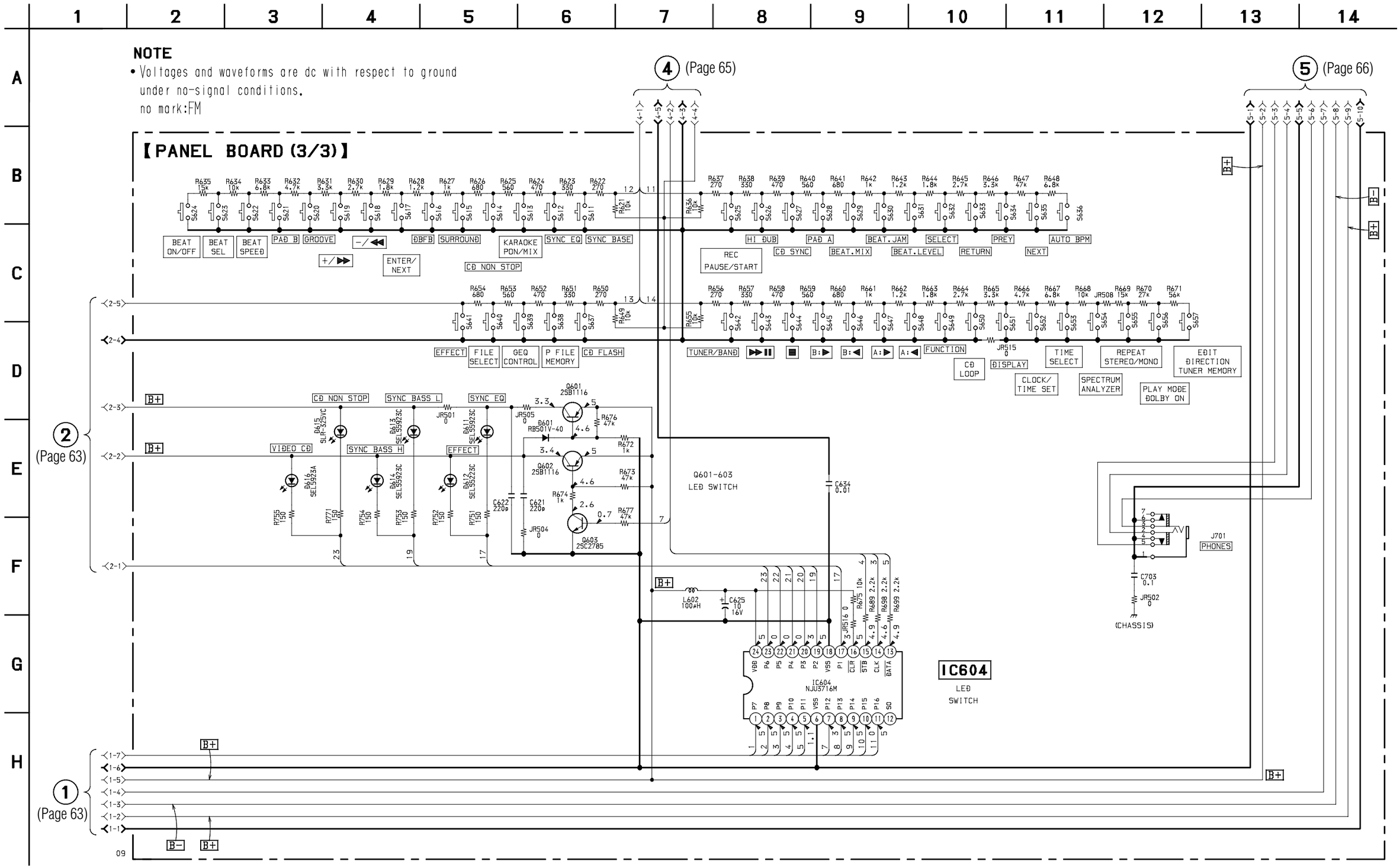
8-20. SCHEMATIC DIAGRAM – PANEL (2/3) SECTION –

- See page 34 for Waveforms.
- See page 61 for Printed Wiring Board.
- See page 78 for IC Block Diagrams.
- See page 89 for IC Pin Functions.

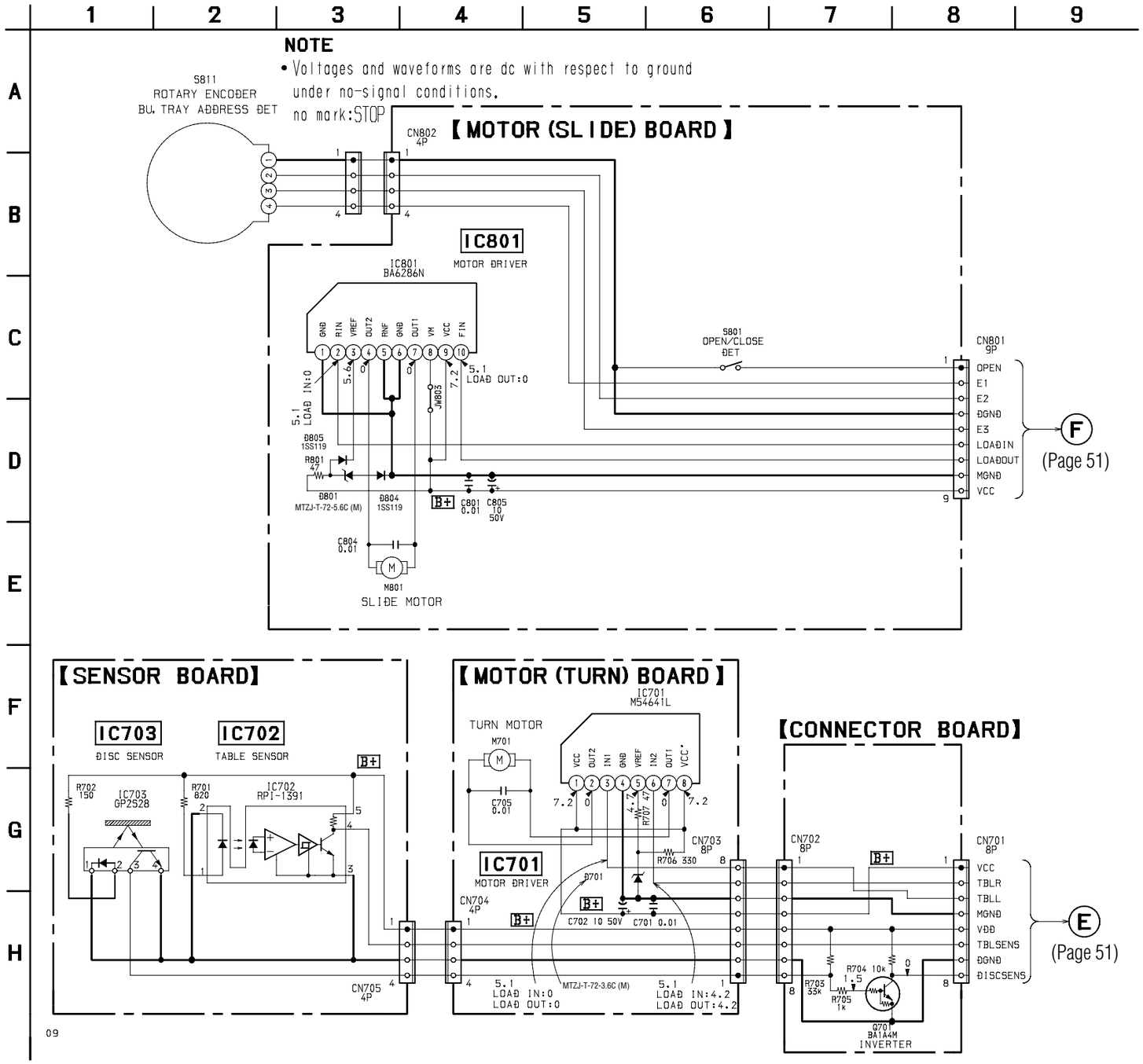


8-21. SCHEMATIC DIAGRAM – PANEL (3/3) SECTION –

- **See page 61 for Printed Wiring Board.**
- **See page 78 for IC Block Diagrams.**

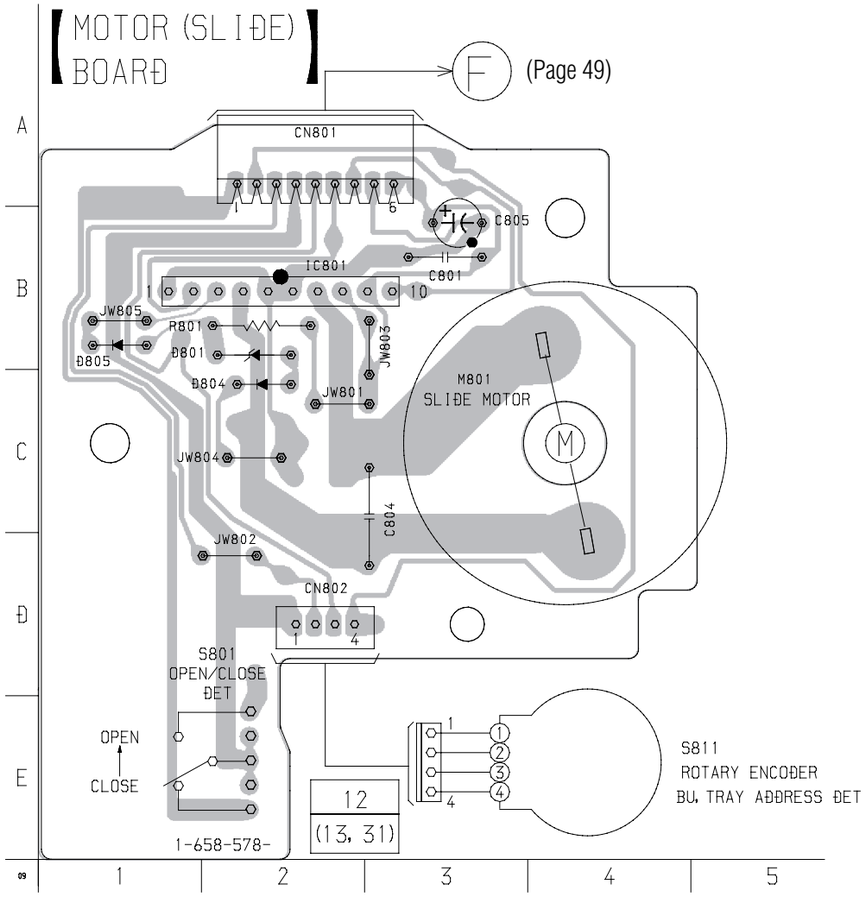


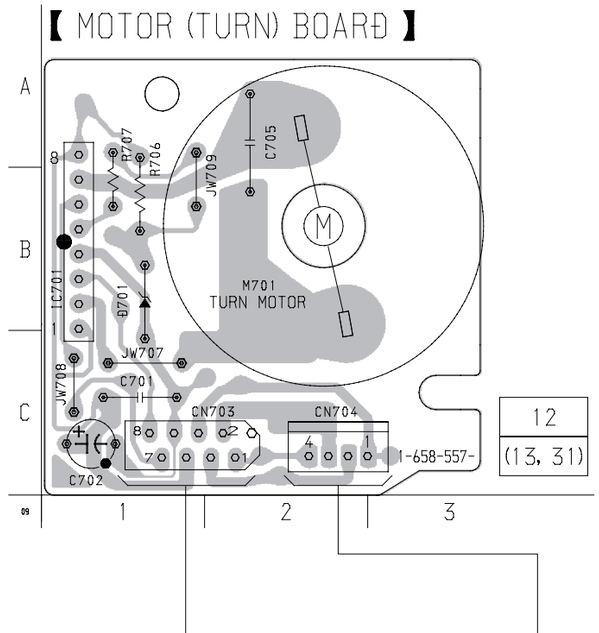
8-22. SCHEMATIC DIAGRAM – CD MOTOR SECTION –

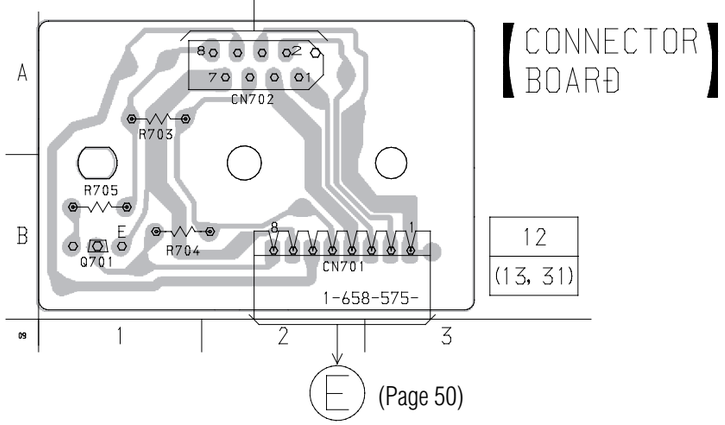


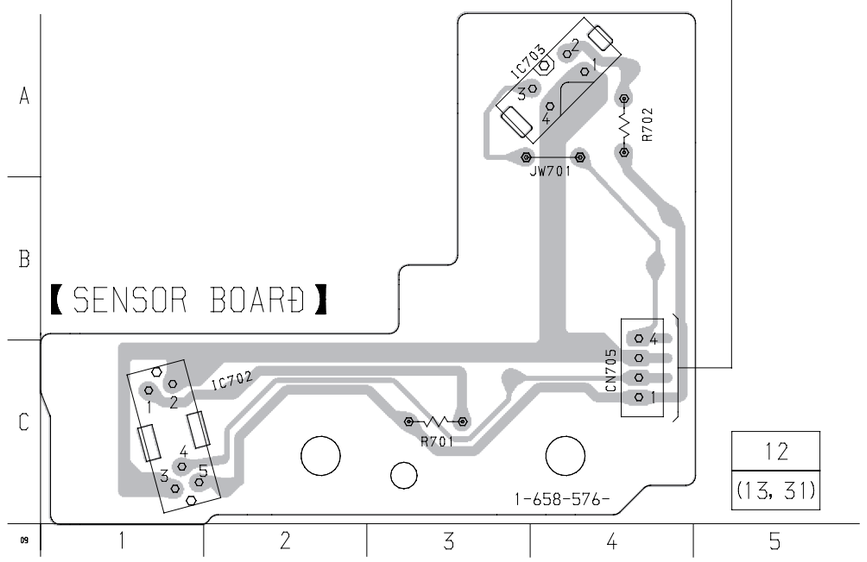
8-23. PRINTED WIRING BOARD – CD MOTOR SECTION –

• See page 18 for Circuit Boards Location.

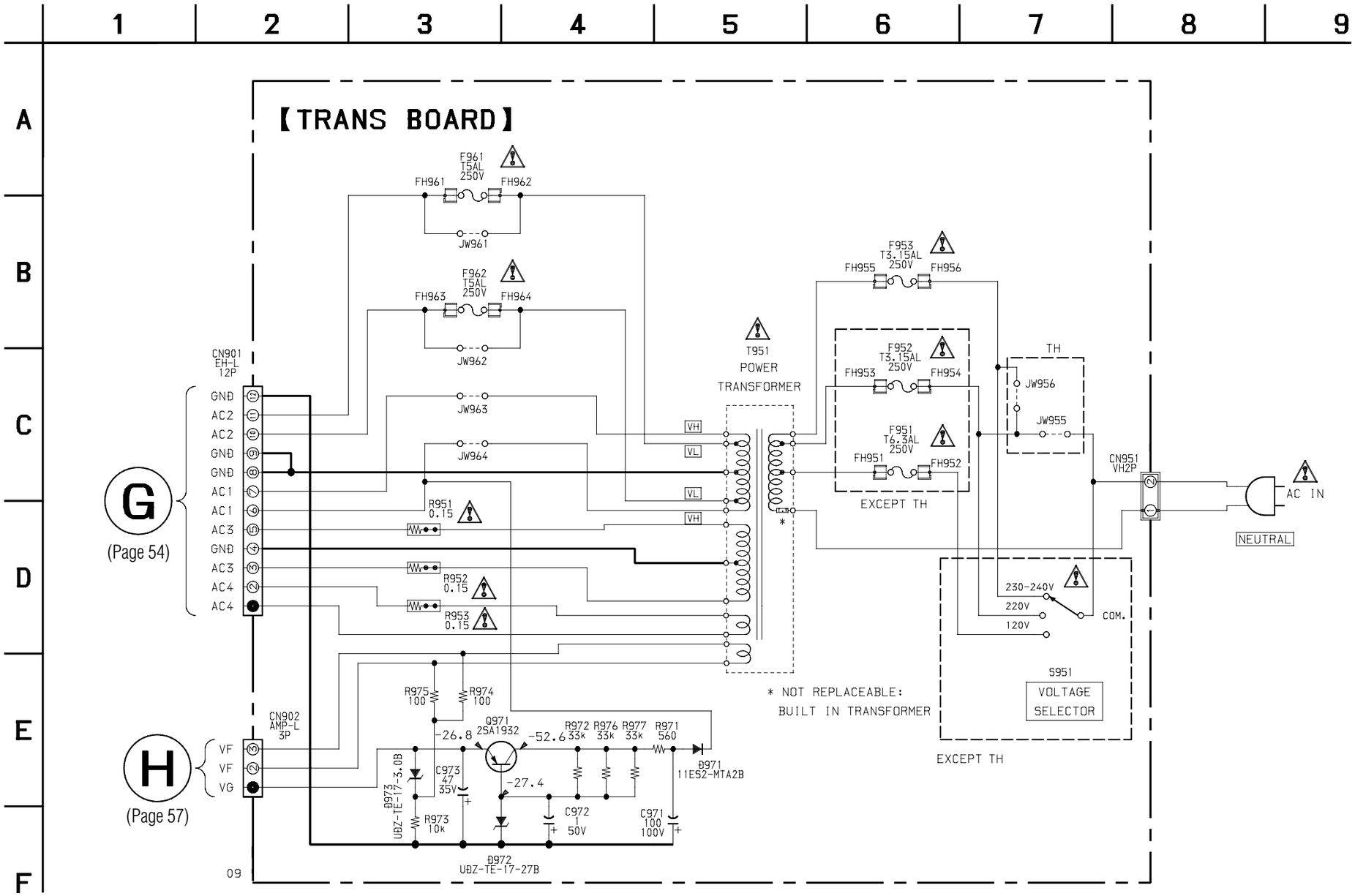








8-24. SCHEMATIC DIAGRAM – TRANS SECTION –

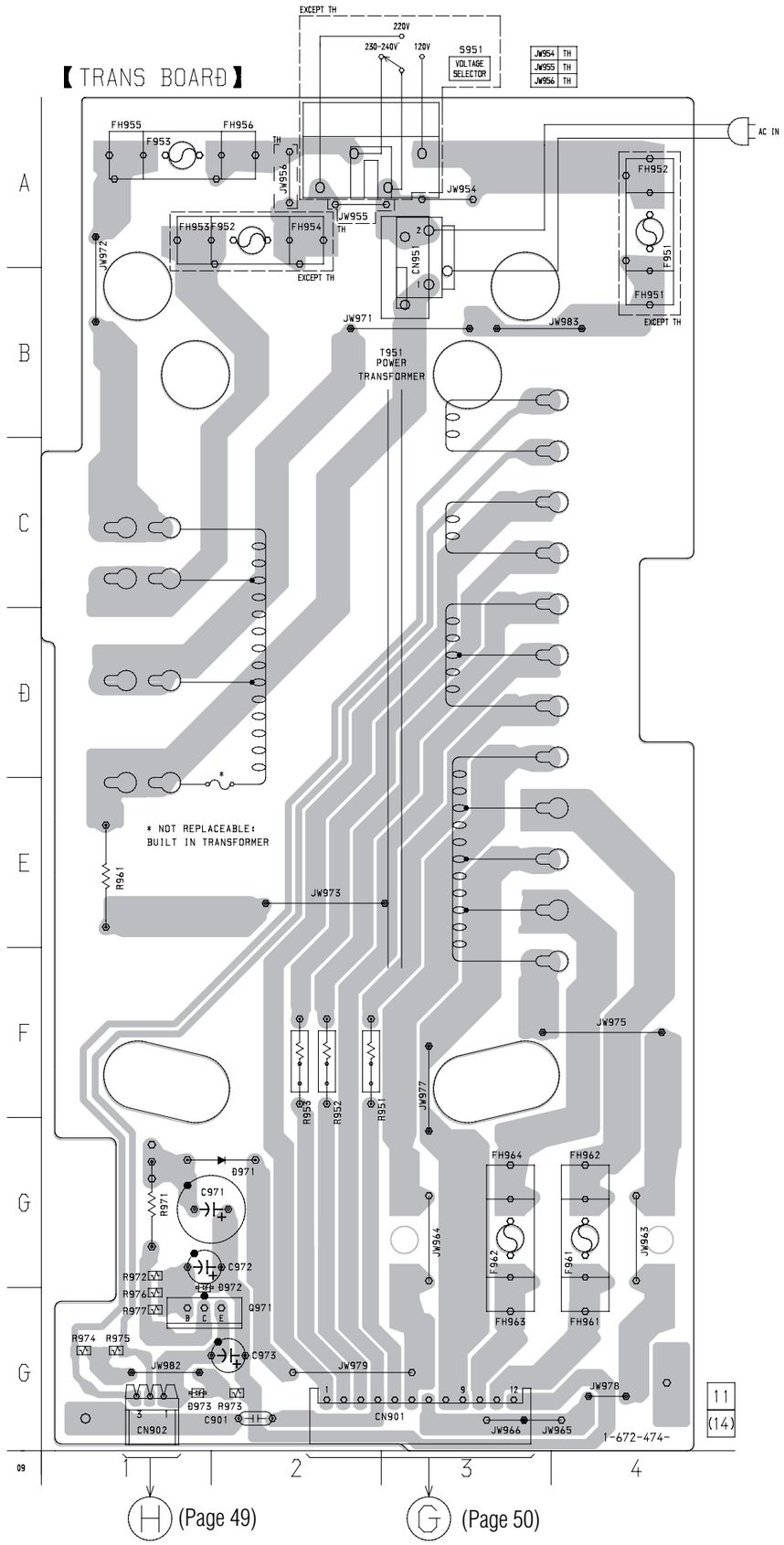


NOTE

- Voltages and waveforms are dc with respect to ground under no-signal conditions.
  no mark:FM

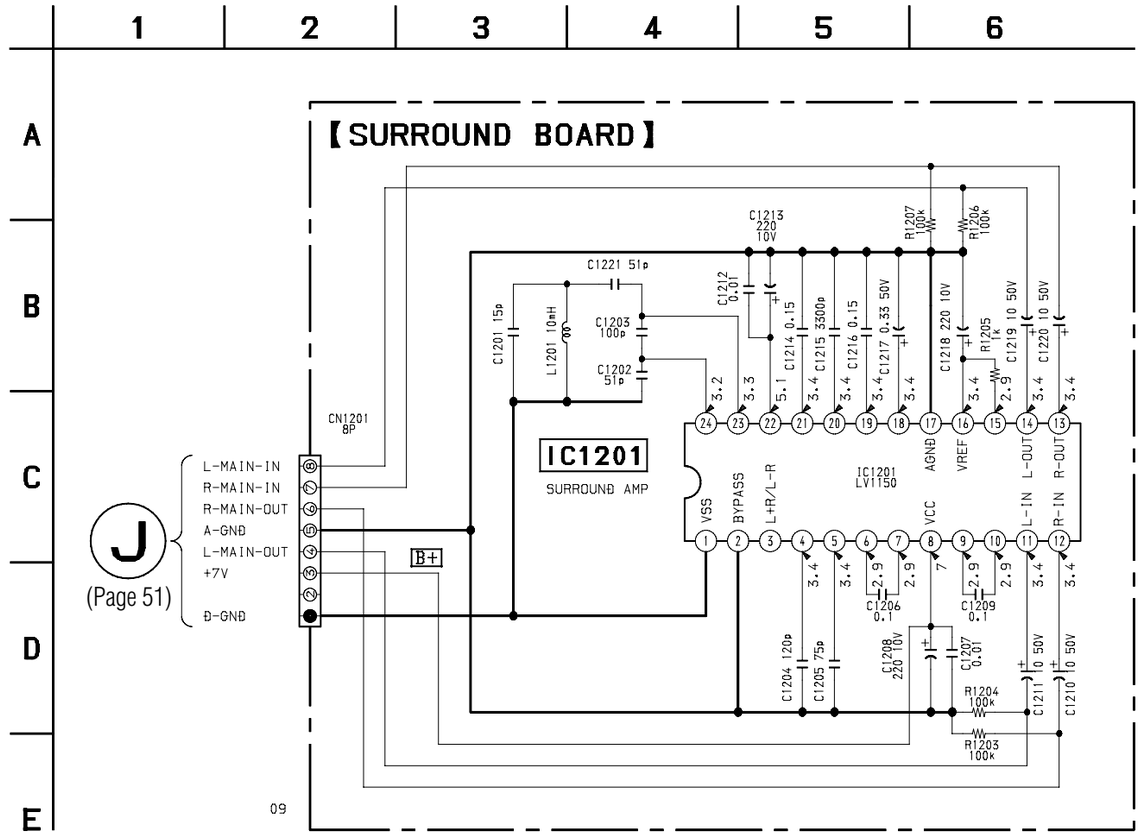
8-25. PRINTED WIRING BOARD – TRANS SECTION –

• See page 18 for Circuit Boards Location.



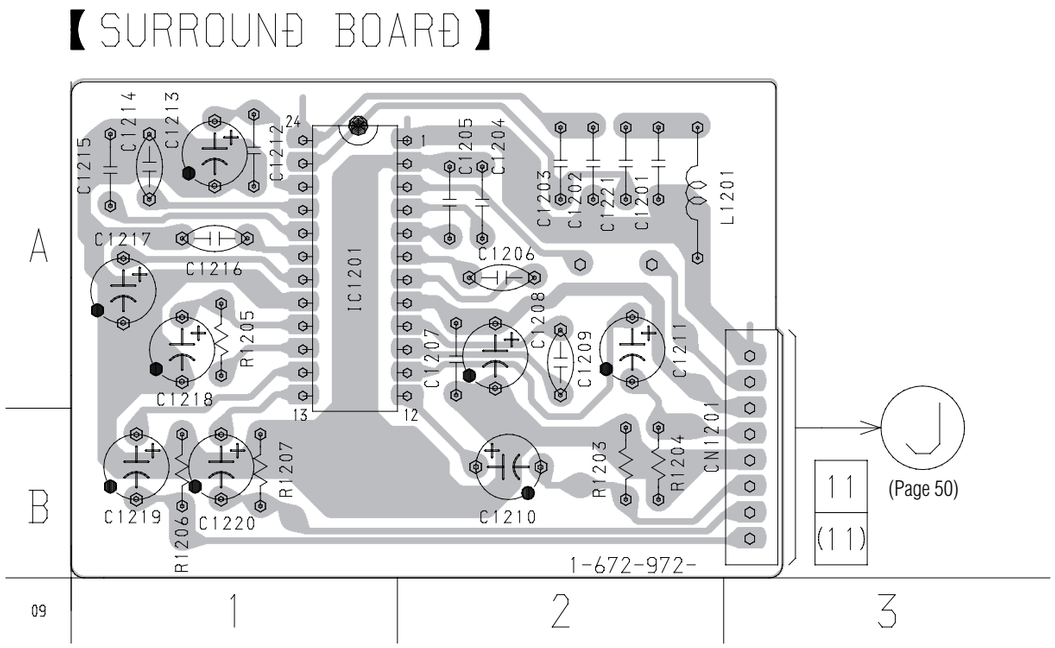
8-26. SCHEMATIC DIAGRAM – SURROUND SECTION –

• See page 79 for IC Block Diagrams.



8-27. PRINTED WIRING BOARD – SURROND SECTION –

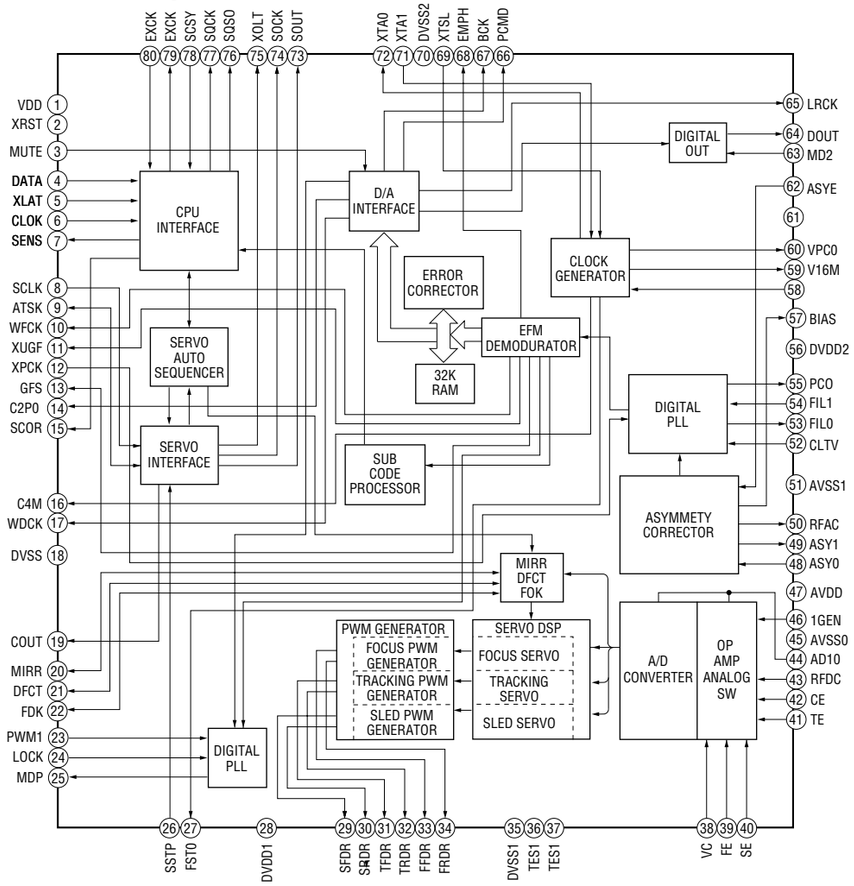
• See page 20 for Circuit Boards Location.



8-28. IC BLOCK DIAGRAMS

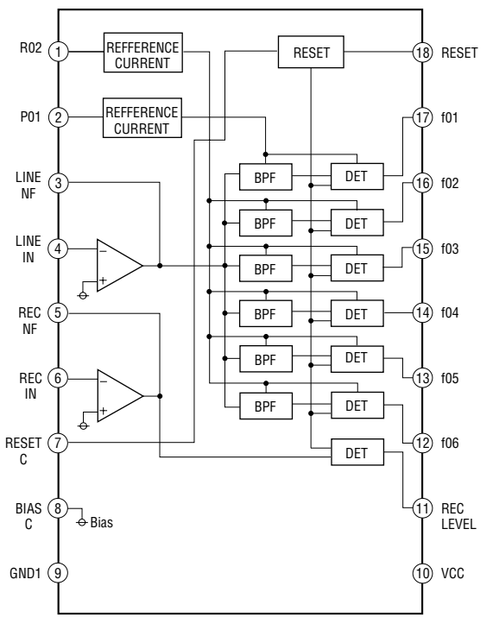
• BD Board

IC101 CXD3008Q

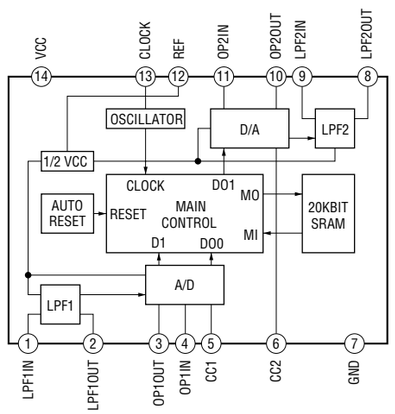


• PANEL (1/3) Board

IC603 BA3830F

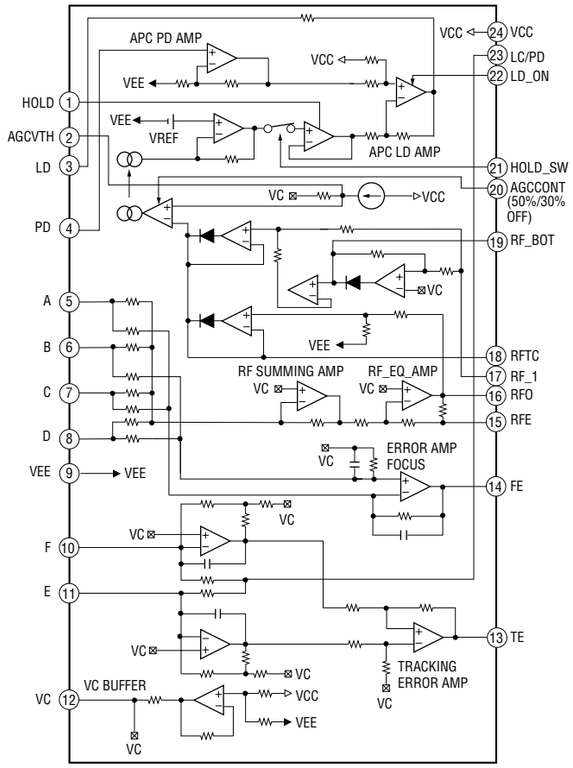


IC711 M65850FP-E1



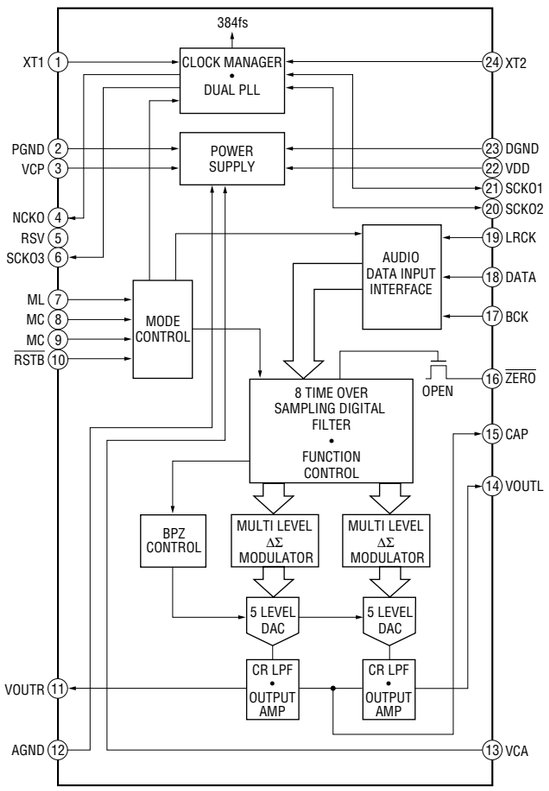
• BD Board

IC103 CXA2568M-T6



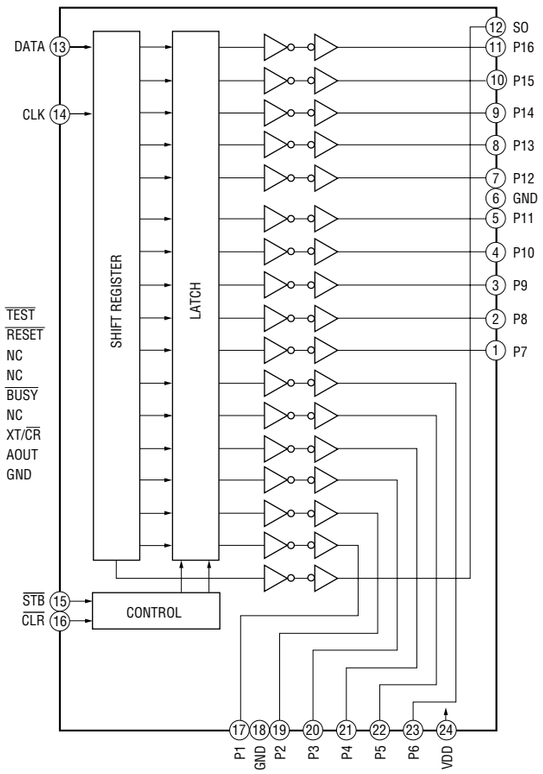
• VIDEO (3/3) Board

IC509 PCM1727E-2/T2



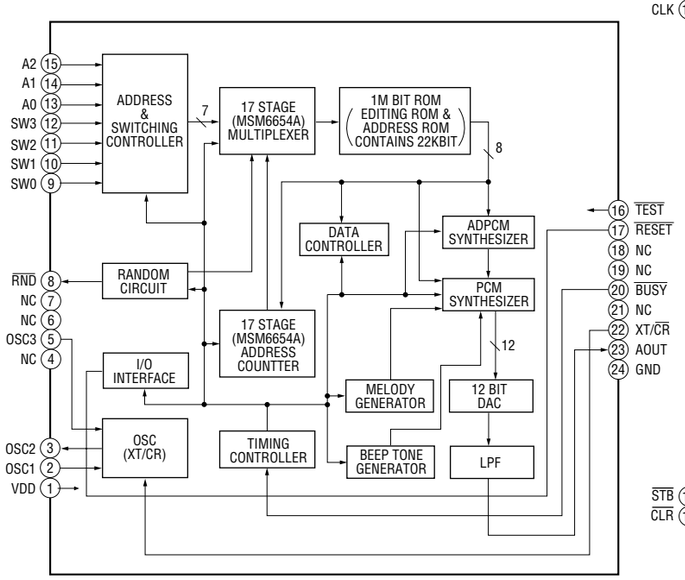
• PANEL (3/3) Board

IC604 NJU3716M-T2



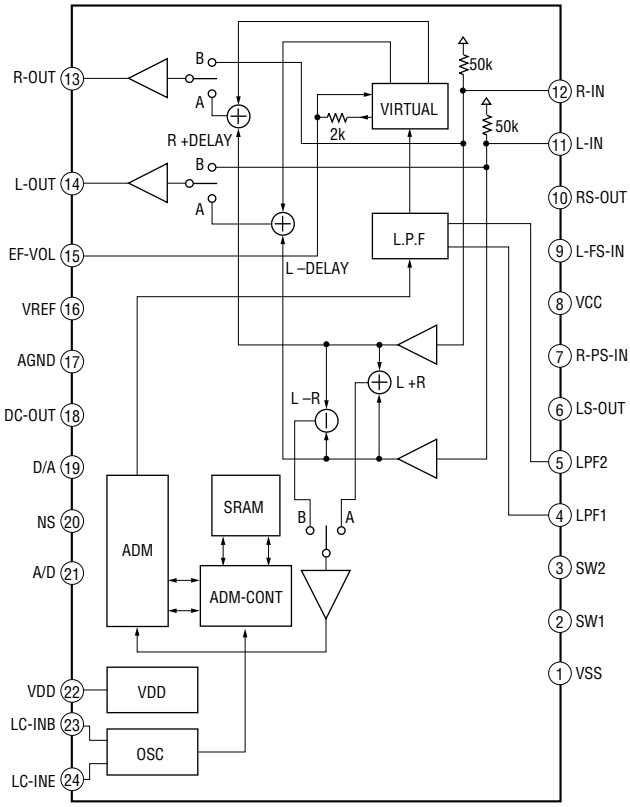
• PANEL (2/3) Board

IC605 MSM6654A-540GS-K



• **SURROUND Board**

IC1201 LV1150



8-29. IC PIN FUNCTIONS

• IC101 DIGITAL SIGNAL PROCESSOR (CXD3008Q) (BD Board)

Pin No.	Pin Name	I/O	Function
1	DVDD0	—	Digital power supply
2	XRST	I	System reset
3	MUTE	I	Muting selection pin
4	DATA	I	Serial data input, supplied from CPU
5	XLAT	I	Latch input, supplied from CPU
6	CLOK	I	Serial data transfer clock input, supplied from CPU
7	SENS	O	SENS output
8	SCLK	I	SENS serial data read-out clock
9	ATSK	I/O	Input pin for anti-shock (Ground)
10	WFCK	O	WFCK (Write Frame Clock) output (Not used)
11	XUGF	O	XUGF output (Not used)
12	XPCK	O	XPCK output (Not used)
13	GFS	O	GFS output (Not used)
14	C2P0	O	C2PO output
15	SCOR	O	Sub-code sync output
16	CM4	O	4.2336MHz output (Not used)
17	WDCK	O	48-bit slot D/A interface word clock (Not used)
18	DVSS	—	Digital ground
19	COUT	O	Numbers of track counted signal output (Not used)
20	MIRR	O	Mirror signal output (Not used)
21	DFCT	O	Defect signal output (Not used)
22	FOK	O	Focus OK output (Not used)
23	PWM1	I	(Not used)
24	LOCK	I/O	GFS in sampled by 460Hz (Not used)
25	MDP	O	Output to control spindle motor servo
26	SSTP	I	Input signal to detect disc inner most trak
27	FST0	O	2/3 divider output (Not used)
28	DVDD1	—	Digital power supply
29	SFDR	O	Sled drive output
30	SRDR	O	
31	TFDR	O	Tracking drive output
32	TRDR	O	
33	FFDR	O	Focus drive output
34	FRDR	O	
35	DVSS1	—	Digital ground
36	TEST	I	TEST pin connected normally ground
37	TES1	I	
38	VC	I	Center voltage input
39	FE	I	FOCUS error signal input
40	SE	I	Sled error signal input

Pin No.	Pin Name	I/O	Function
41	TE	I	Tracking error signal input
42	CE	I	Center servo analog input
43	RFDC	I	RF signal input
44	ADI0	O	Test pin (Not used)
45	AVSS0	—	Analog ground
46	IGEN	I	Power supply pin operational amplifiers
47	AVDD	—	Analog power supply
48	ASYO	O	EFM full swing output
49	ASYI	I	Asymmetry comparate voltage input
50	RFAC	I	EFM signal input
51	AVSS1	—	Analog ground
52	CLTV	I	Control voltage input for master VCO
53	FILO	O	Filter output for master PLL
54	FILI	I	Filter input for master PLL
55	PCO	O	Charge-pump output for master PLL
56	AVDD1	—	Analog power supply
57	BIAS	I	Asymmetry circuit constant current input
58	VCTL	I	Control voltage input for variable pitch PLL
59	V16M	I/O	16.9344MHz output (Not used)
60	VPCO	O	Charge-pump output for variable pitch PLL (Not used)
61	DVDD2	—	Digital power supply
62	ASYE	I	Asymmetry circuit ON/OFF
63	MD2	I	Digital-out ON/OFF control
64	DOUT	O	Digital-out output
65	LRCK	O	48-bit slot D/A interface, LR clock output
66	PCMD	O	48-bit slot D/A interface, Serial deta output
67	BCLK	O	48-bit slot D/A interface, bit clock output
68	EMPH	O	Playback disc output in emphasis mode (Not used)
69	XTSL	I	X’tal selection input pin
70	DVSS2	—	Digital ground
71	XTAI	I	X’tal oscillator circuit input
72	XTAO	O	X’tal oscillator circuit output (Not used)
73	SOUT	O	(Not used)
74	SOCK	O	
75	XOCT	O	
76	SQSO	O	Sub-Q serial output
77	SQCK	I	Clock input for SQSO read-out
78	SCSY	I	Sub-code input
79	SBSO	O	Sub-P through Sub-W serial output (Not used)
80	EXCR	I	Clock input for SBSO read-out

• **IC502 MPEG DECODER, MECHANISM CONTROL (M30620MC-A05FP) (VIDEO (1/3) Board)**

Pin No.	Pin Name	I/O	Function
1	SENSE	I	Internal state (SENSE) monitor input (IC101)
2	SENSE CLK	O	Serial data reading clock output (IC101)
3	DSP DATA	O	Serial data output (IC101)
4	DSP LATCH	O	Lach output (IC101)
5	DSP CLK	O	Serial data clock output (IC101)
6	TSENS	I	Not used
7	REMOTE IN	I	Not used
8	BYTE	I	External bus width change input (Connected to ground)
9	VSS	–	Ground
10	DSP MUTE	O	Mute output (IC101) “H” : mute
11	CTRL1 (L : DOUBLE)	O	Double change output (IC101) “L” : double
12	XRESET	I	System reset input “L” : reset
13	XOUT	O	Main clock output (10MHz)
14	VSS	–	Ground
15	XIN	I	Main clock input (10MHz)
16	VCC	–	+5V power supply
17	NMI	I	Requests mask disable interruption input (Connected to +5V)
18	SCOR	I	Subcode sync input (IC101)
19	D SENS	I	Not used
20	CL680 INT	I	Video CD interruption input (IC505)
21	CL680 HSEL	O	Video CD select data of the host MPU (IC505)
22	DF LATCH	O	Digital filter latch output (IC509)
23	CL680 HRDY	I	Ready signal input for communication to the host MPU (IC505)
24	680 RESET	O	Video CD reset output (IC505) “L” : reset
25	JOG1	I	Not used
26	JOG2	I	Not used
27	CTRL2	O	Double control output (IC101) “H” : double
28	LD ON	O	Laser diode ON/OFF output
29	IIC1	I/O	IIC convertion microcomputer receive data (Former type), IIC clock input from master control (New type)
30	IIC0	I/O	IIC convertion microcomputer transmittion data (Former type), IIC data input from master control (New type)
31	DATA1O	O	Serial 1 data output (IC505, 509)
32	DATA1I	I	Serial 1 data input (IC505, 509)
33	CLK1	O	Serial 1 clock output
34	SHARPNESS	O	Sharpness output L : normal, H : sharpness
35	XVLEVEL. DOWN	O	Fix the video signal output level output
36	SUBQ DATA	I	Serial 2 data input for subcode sync reading
37	SUBQ CLK	I	Serial 2 clock input for subcode sync reading
38	P. ON	I	Not used
39	BUS XRDY	I	Not used
40	BUS	I	Not used
41	BUS XHOLD	I	Not used
42, 43	BUS	I	Not used
44	BUS XRD	I	Model selection input “L” : chinese model, “H” : except chinese model
45	BUS	I	V sync signal input

Pin No.	Pin Name	I/O	Function
46	BUS XWRL	I	Not used
47	LO. BOOST	I	Not used
48	AUDIO MUTE	O	Audio mute output “L” : mute
49	LOAD OUT	I	Not used
50	LOAD IN	I	Not used
51	INSW	I	Not used
52	OUTSW	I	Not used
53	MODEL 1	I	L : System input (Fixed at “L”)
54	MODEL 2	I	L : System input (Fixed at “L”)
55	TBLL	I	Not used
56	TBLR	I	Not used
57	ENC 1	I	Not used
58	ENC 2	I	Not used
59	ENC 3	I	Not used
60	—	I	Not used
61	—	I	Not used
62	VCC	–	+5V power supply
63	—	I	Not used
64	VSS	–	Ground
65	A7	O	Video mute output “L”
66 to 71	A6 to A1	I	Not used
72	U to I	I	IIC convertion microcomputor transmittion input
73	TEST LED	O	TEST LED for MPEG decoder
74	TEST 1	I	Test mode for Video CD check
75	TEST 2	I	Test mode for servo check
76	TEST 3	I	Not used
77	DEVICE RESET	O	Device system rest output “L” : reset
78	STANDBY	I	Not used
79	FL CS	I	Not used
80	FL	I	Not used
81 to 88	D7 to D0	I	Not used
89	MIC CTRL	I	Not used
90	KEY 1	I	Not used
91	KEY 2	I	Not used
92	KEY 3	I	Not used
93	NY/PAL	I	NTSC/PAL select switch input
94	MUSIC VOL	I	Not used
95	KEY 4	I	Not used
96	AVSS	–	A/D converter ground
97	MODE. SW	I	Not used
98	VREF	I	A/D converter reference voltage input (Connected to +5V)
99	AVCC	–	A/D converter +5V power supply
100	AMP. ON	I	Not used

• **IC505 CD DECODER, SYSTEM CONTROL (CL680T-D1) (VIDEO (2/3) Board)**

Pin No.	Pin Name	I/O	Function
1	NC	–	Not used
2	VSS	–	Ground
3	CD-BCK	I	CD Decode bit clock
4	CD-DATA	I	CD Decode data
5	CD-LRCK	I	CD Decode Left or Right channel selection clock
6	CD-C2PO	I	CD Decode C2 error data
7	NC	–	Not used
8	NC	–	Not used
9	NC	–	Not used
10	MD0	I/O	Data bus between Microcode ROM/DRAM and CL680
11	MD1	I/O	Data bus between Microcode ROM/DRAM and CL680
12	MD2	I/O	Data bus between Microcode ROM/DRAM and CL680
13	MD3	I/O	Data bus between Microcode ROM/DRAM and CL680
14	MD4	I/O	Data bus between Microcode ROM/DRAM and CL680
15	MD5	I/O	Data bus between Microcode ROM/DRAM and CL680
16	VSS	–	Ground
17	MD6	I/O	Data bus between Microcode ROM/DRAM and CL680
18	VDD3	–	+3.3V Power supply
19	MD7	I/O	Data bus between Microcode ROM/DRAM and CL680
20	VSS	–	Ground
21	MD8	I/O	Data bus between Microcode ROM/DRAM and CL680
22	VDD3	–	+3.3V Power supply
23	MD9	I/O	Data bus between Microcode ROM/DRAM and CL680
24	MD10	I/O	Data bus between Microcode ROM/DRAM and CL680
25	MD11	I/O	Data bus between Microcode ROM/DRAM and CL680
26	MD12	I/O	Data bus between Microcode ROM/DRAM and CL680
27	MD13	I/O	Data bus between Microcode ROM/DRAM and CL680
28	MD14	I/O	Data bus between Microcode ROM/DRAM and CL680
29	MD15	I/O	Data bus between Microcode ROM/DRAM and CL680
30	NC	–	Not used
31	NC	–	Not used
32	NC	–	Not used
33	NC	–	Not used
34	NC	–	Not used
35	NC	–	Not used
36	NC	–	Not used
37	$\overline{\text{MCE}}$	O	Chip enable signal to Microcode ROM
38	$\overline{\text{MWE}}$	O	Write enable signal to DRAM
39	VSS	–	Ground
40	CAS	O	Column address strove : Latch the column address to DRAM
41	VDD3	–	+3.3V power supply
42	$\overline{\text{RAS0}}$	O	Row address strove : Latch row address to DRAM
43	$\overline{\text{RAS1}}$	–	Not used
44	MA10	O	Address data from CL680 to Microcode ROM
45	MA9	O	Address data from CL680 to Microcode ROM

Pin No.	Pin Name	I/O	Function
46	MA8	O	Address data from CL680 to Microcode ROM/DRAM
47	VSS	–	Ground
48	MA7	O	Address data from CL680 to Microcode ROM/DRAM
49	VDD3	–	+3.3V Power supply
50	MA6	O	Address data from CL680 to Microcode ROM/DRAM
51	MA5	O	Address data from CL680 to Microcode ROM/DRAM
52	MA4	O	Address data from CL680 to Microcode ROM/DRAM
53	VSS	–	Ground
54	MA3	O	Address data from CL680 to Microcode ROM/DRAM
55	VDD3	–	+3.3V Power supply
56	MA2	O	Address data from CL680 to Microcode ROM/DRAM
57	MA1	O	Address data from CL680 to Microcode ROM/DRAM
58	MA0	O	Address data from CL680 to Microcode ROM/DRAM
59	PGIO7	I/O	Not used
60	$\overline{\text{RESET}}$	I	Reset signal input from the host MPU
61	VDDMAX-IN	I	Fix the maxium input voltage each input pin and I/O pin
62	NC	–	Not used
63	NC	–	Not used
64	NC	–	Not used
65	AGND DAC	–	Ground
66	AVDD DAC	–	+3.3V Power supply
67	COMPOS OUT	O	Not used
68	AGND DAC	–	Ground
69	Y-OUT	O	Luminance signal out
70	AVDD DAC	–	+3.3V Power supply
71	AGND DAC	–	Ground
72	RREF	I	Fix the video signal output level
73	(1.235V) VREF	O	Reference voltage (+1.235V)
74	AVDD DAC	–	+3.3V Power supply
75	C-OUT	O	Chrominance signal out
76	AGND DAC	–	Ground
77	(GCK INT) CLK SEL	I	GCK selection “H”; Internal, “L”; External
78	CLK SEL	I	DA-XCK selection (1)
79	CLK SEL	I	DA-XCK selection (2)
80	VSS	–	Ground
81	RESERVED	I	Selection the operation clock 42.336MHz
82	VDD3	–	+3.3V Power supply
83	DA-EMP	–	Not used
84	RESERVED	–	Not used
85	AGND PLL	–	Ground
86	DA-XCLK	I	Main reference clock input (16.9344MHz=384fs)
87	AVDD PLL	–	+3.3V
88	PGIO4	I/O	Not used
89	PGIO5	I/O	Not used
90	PGIO6	I/O	Not used

Pin No.	Pin Name	I/O	Function
91	PGIO0	I/O	Not used
92	PGIO8	I/O	Not used
93	PGIO2/$\overline{\text{VSYNC}}$/CSYNC	O	Vertical synchronized signal of video signal
94	AVDD PLL	–	+3.3V Power supply
95	NC	–	Not used
96	NC	–	Not used
97	NC	–	Not used
98	AGND PLL	–	Ground
99	VSS	–	Ground
100	NC	–	Not used
101	PGIO3/$\overline{\text{HSYNC}}$	I/O	Not used
102	VDD3	–	+3.3V Power supply
103	PGIO1/VCK-OUT	I/O	Not used
104	VSS	–	Ground
105	GCK	I	Not used
106	VCK-IN	I	Main clock for video signal processer
107	GCKOUT/DA-EMP	O	Not used
108	DA-LRCK	O	Digital Audio Left or Right channel selection clock
109	VDDMAX-OUT	O	Fix the maxium output voltage certain output pins (Connected to +5V)
110	DA-DATA	O	Digital Audio data
111	DA-BCK	O	Digital Audio bit clock
112	HD-OUT	O	Serial Data output from CL680 to the host MPU
113	HRDY	O	Ready signal CL680 is ready for communication to the host MPU
114	$\overline{\text{HINT}}$	O	Request signal for interrupting the host MPU
115	CDG-SCK	I/O	Not used
116	VSS	–	Ground
117	HCK	I	Host clock : referance signal for the host bus interface
118	VDD3	–	+3.3V Power supply
119	HD-IN	I	Serial Data output ftom the host MPU to CL680
120	VDD3	–	+3.3V Power supply
121	HSEL	I	Select data or address of the host MPU
122	CDG-SDATA	I	Ground (Not used)
123	CDG-VFSY	I	Ground (Not used)
124	CDG-SOS1	I	Ground (Not used)
125	NC	–	Not used
126	NC	–	Not used
127	NC	–	Not used
128	NC	–	Not used

• **IC501 MASTER CONTROL (M30622MA-A09FP) (MAIN Board)**

Pin No.	Pin Name	I/O	Function
1	STK-MUTE	O	Power amp ON/OFF signal output
2	POWER	O	Power ON/OFF signal output
3	F-RELAY	O	Front speaker relay control output
4	REAR-RELAY	O	Rear speaker relay control output (Not used)
5	CD-POWER	O	CD power on signal output
6	LINE-MUTE	O	Line mute ON/OFF selection output
7	DBFB-H/L	O	DBFB H/L select signal output
8, 9	–	–	Not used
10	XC-IN	I	X'tal (32.768MHz)
11	XC-OUT	O	
12	RESET	I	Reset signal input
13	X-OUT	O	X'tal (16MHz)
14	VSS	–	Ground
15	X-IN	I	X'tal (16MHz)
16	VCC	–	Power supply (+5V)
17	NMI	I	Not used (PULL UP EVER+5V)
18	WAKE UP	I	WAKE UP (Fixed at fixed at "L")
19	SCOR	I	Subcode data request signal output (Not used)
20	RDS-INT	I	RDS data interrupt input
21	RDS-DATA	I	
22	AC-CUT	I	Back up signal input
23	PL-CLK	O	Clock signal to pro-logic (Not used)
24	PL-DATA	O	Data signal to pro-logic (Not used)
25	PL-LAT	O	Latch signal to pro-logic (Not used)
26	TIMER LED	I	Timer LED ON/OF
27	PROTECTOR	I	Speaker protect ON/OF
28	–	–	Not used
29	IIC-CLK	O	Clock output for IC601
30	IIC-DATA	O	Data output for IC601
31	–	–	Not used
32	SQ-DATA	I	Subcode Q data clock input
33	SQ-CLK	I	Not used
34	SW-MODE	O	Not used
35	CD-DATA	O	CD data output (Not used)
36	RY-SW	I	Head phone swich detect
37	CD-CLK	O	CD clock output (Not used)
38	493-LAT	O	Latch signal output for M62493FP (IC101)
39	ST-BY LED/ CLOCK-OUT	O	Clock ond stand by LED signal output
40	L+R/L-R	I	Not used
41	BY-PASS	I	
42	FL-SW	I	FL switch ON/OFF
43	STBY RELAY	I	Stand by relay ON/OFF
44	BASS FREQ	O	FREQ high/low signal for SYNC bass
45, 46	–	–	Not used
47	493-DATA	O	Data output for M62493FP (IC101)
48	493-CLK	O	Clock output for M62493FP (IC101)
49	ST-MUTE	O	Tuned mute signal output

Pin No.	Pin Name	I/O	Function
50	STEREO	I	Stereo detection for tuner
51	TUNED	I	Tuned detection for tuner
52	ST-CE	O	Tuner chip enable output
53	ST-DOUT	O	Tuner data output
54	ST-DIN	I	Tuner data input
55	ST-CLK	O	Tuned clock output
56	SENS	I	BD Condition signal input (Not used)
57	HDLD	O	Mode hold signal output (Not used)
58	XLT	O	CD latch signal output (Not used)
59	XRST	O	CD reset signal output
60	DISC-SENS	I	Slit sensor of disc table input
61	T-SENS	I	CD table detection signal input
62	VCC	–	Power supply (+5V)
63	TBL-L	O	Table motor control output
64	VSS	–	Ground
65	TBL-R	O	Table motor control output
66	LOAD-OUT	O	Loading motor control signal output
67	LOAD-IN	O	
68	ENC 3/UP-SW	I	Disc tray address detect encoder input
69	ENC 2/DISC-LED	I	
70	ENC 1	I	
71	OUT-OPEN	O	Loading out detection signal output
72	B-TRG	O	Trigger motor control output
73	A-TRG	O	
74	CAP-M-COT2	O	Capstan motor control 1(-) signal output
75	CAP-M-COT1	O	Capstan motor control 2(-) signal output
76	CAP-M-H/L	O	Capstan motor H/L speed select signal output
77	AMS-IN	I	Connected to ground
78	TC-MUTE	O	TC mute ON/OFF selection output
79	R/PB/PAS	O	REC/PB/PASS selection output
80	NR-ON/OFF	O	NR ON/OFF signal output
81	REC-MUTE	O	REC mute ON/OFF selection output
82	BIAS	O	Bias ON/OFF selection output
83	EQ-H/N	O	Equalizer H/N select output
84	PB-A/B	O	PB Deck A/Deck B select output
85	ALC	O	ALC ON/OFF output
86	B-PLAY-SW	I	Deck B play detect
87	A-PLAY-SW	I	Deck A play detect
88	A-HALF	I	Deck A cassette detect
89	B-HALF	I	Deck B cassette detect
90	B-SHUT	I	B Deck reel pulse detector
91	A-SHUT	I	A Deck reel pulse detector
92	SOFT-TEST	O	Software test port
93, 94	KEY/CD-ADJ	I	CD adjust point port
95	MODEL IN	I	Version select signal input
96	AVSS	–	Ground
97	SPEC-IN	I	Version select signal input
98	VREF	I	Analog reference voltage input
99	AVCC	–	Analog power supply
100	TC-RELAY	O	REC/PB head selection output for IC602

• **IC601 DISPLAY CONTROL (TMP88CS76F-6005) (PANEL Board)**

Pin No.	Pin Name	I/O	Function
1	SIRCS	I	Remote commander signal input
2	JOG A	I	Rotary encoder (S601) pulse input
3	L/P SCK	O	LED/PAD clock output
4	LED LA	O	LED latch output
5	L/P DAT	O	LED/PAD data output
6	PAD LA	O	PAD latch output
7	L SEL	O	LED select signal
8	JOG B	I	Rotary encoder (S601) pulse input
9	VOL A	I	Rotary encoder (S602) pulse input
10	VOL B	I	
11 to 14	KEY 0 to KEY 3	I	Key input
15	GRADATION L	O	LED gradation signal (left)
16	S LOW (F01)	O	Sptctrum analyzer input (Super low flegency) (40Hz)
17	BPF 1 (F02)	O	Sptctrum analyzer input (100Hz)
18	BPF 2	O	Sptctrum analyzer input (400Hz)
19	BPF 3	O	Sptctrum analyzer input (2KHz)
20	BPF 4	O	Sptctrum analyzer input (6KHz)
21	ALL B (L+R)	I	Sptctrum analyzer input (all band)
22	GLADATION R/WAKE UP	O	LED gradation signal (right)/WAKE UP signal
23	VSS I/O	–	Ground
24	VASS	–	Ground
25	VAref	I	Analog reference voltage input
26	VDD I/O	–	Power supply (+5V)
27 to 40	G 18 to G 5	O	FL gride signal output
41	VDD VFT	–	Power supply (+5V)
42 to 45	G 4 to G 1	O	FL gride signal output
46 to 67	S 1 to S 22	O	FL segment signal output
68	VKK	–	Power supply (-30V)
69	VDD for CPU	–	Power supply (+5V)
70	X IN	I	X'tal (12.5MHz)
71	VSS for CPU	–	Ground
72	X OUT	O	X'tal (12.5MHz)
73	RESET	I	Reset signal input from main controller
74	CH for PAD	O	Channel signal output for PAD
75	BUSY for PAD	O	Busy signal output for PAD
76	TEST	I	Connected ground
77	–	–	Not used (to ground)
78	IIC DATA	O	Data output for IC501
79	IIC CLK	O	Clock output for IC501
80	–	–	Not used (to ground)

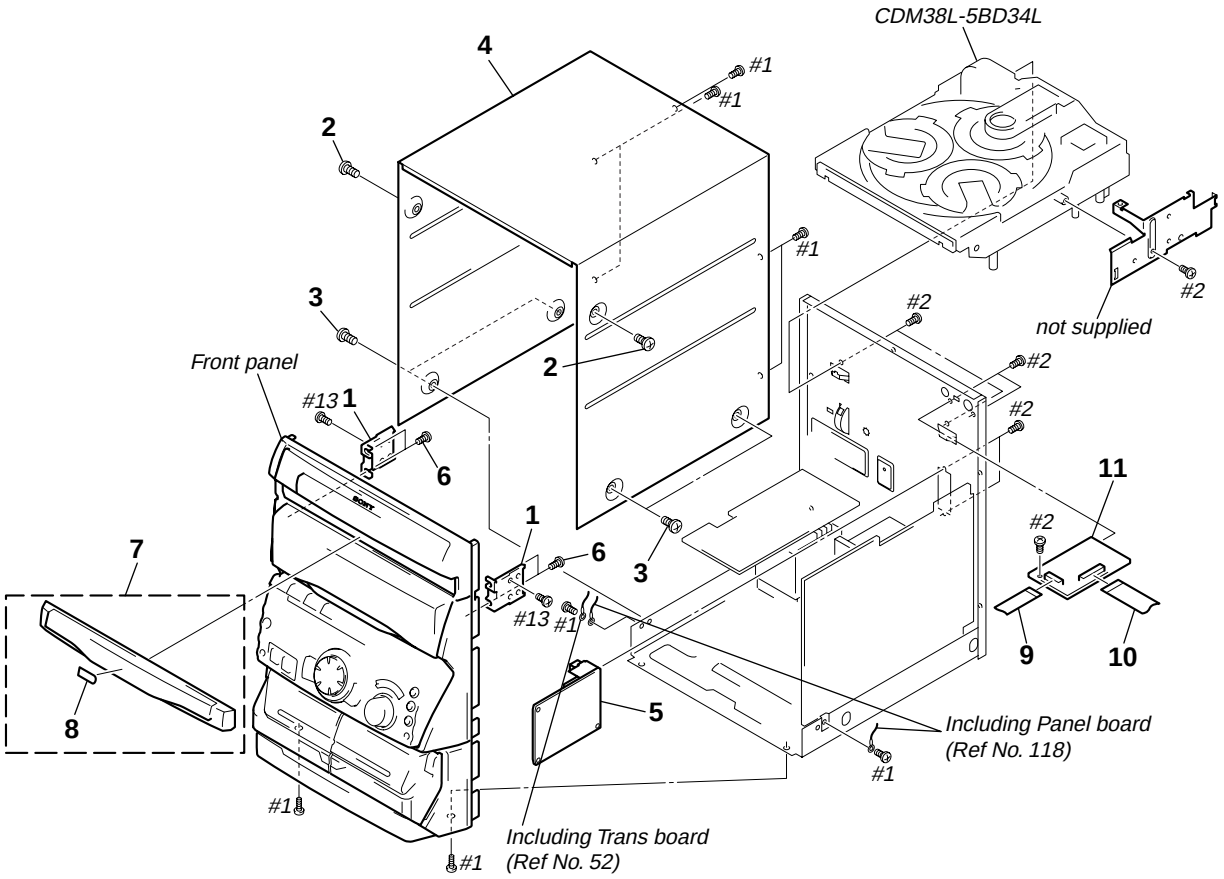
SECTION 9
EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE)
  ↑
  Cabinets color

- Abbreviation
  EA : Saudi Arabia model
  HK : Hong Kong model
  SP : Singapore model
  MY : Malaysia model
  TW : Taiwan model
  IA : Indonesia model
  TH : Thai model

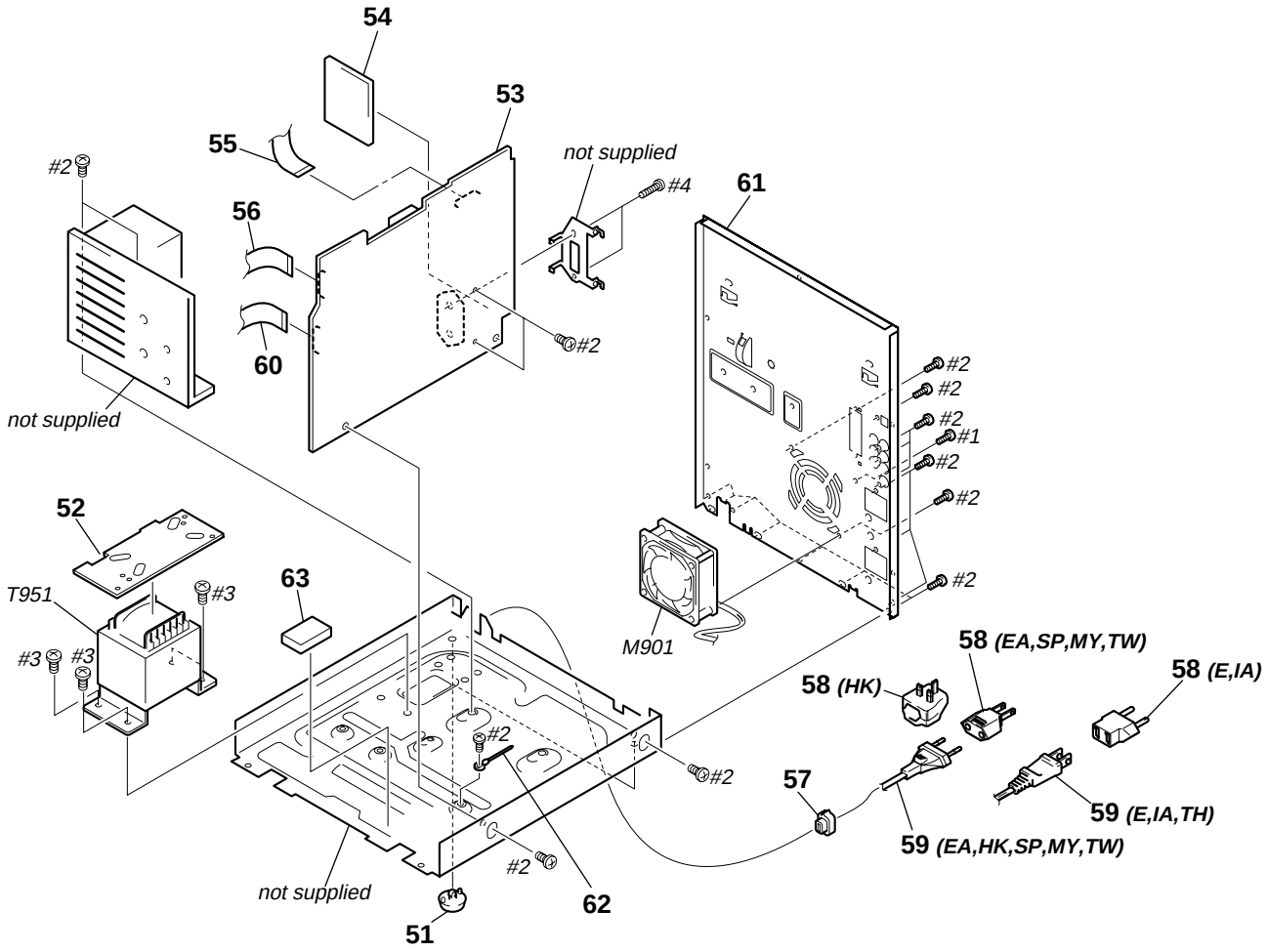
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

9-1. CASE SECTION



Ref. No.	Part No.	Description	Remark
* 1	4-996-716-01	HOLDER (CDM)	
2	3-363-099-41	SCREW (CASE 3 TP2)(GRAY)	
2	3-363-099-71	SCREW (CASE 3 TP2)(SILVER)	
3	3-363-099-01	SCREW (CASE 3 TP2)(GRAY)	
3	3-363-099-11	SCREW (CASE 3 TP2)(SILVER)	
* 4	4-221-149-21	CASE (SILVER)	
* 4	4-221-149-61	CASE (GRAY)	
5	1-233-545-11	TUNER UNIT (TH)	
5	1-233-546-13	ENCAPSULATED COMPONENT (EXCEPT TH)	
6	4-951-620-01	SCREW (2.6x8), +BVTP	
7	X-4950-965-1	PANEL ASSY, LOADING (VX8)(GRAY)	
7	X-4951-028-1	PANEL ASSY, LOADING (VX8)(SILVER)	
7	X-4951-629-1	PANEL ASSY, LOADING (VX8J)	
8	4-991-781-01	EMBLEM (VCD)	
9	1-790-927-11	WIRE (FLAT TYPE) (13 CORE)	
10	1-775-212-11	WIRE (FLAT TYPE) (23 CORE)	
11	A-4724-727-A	VIDEO BOARD, COMPLETE	

9-2. CHASSIS SECTION

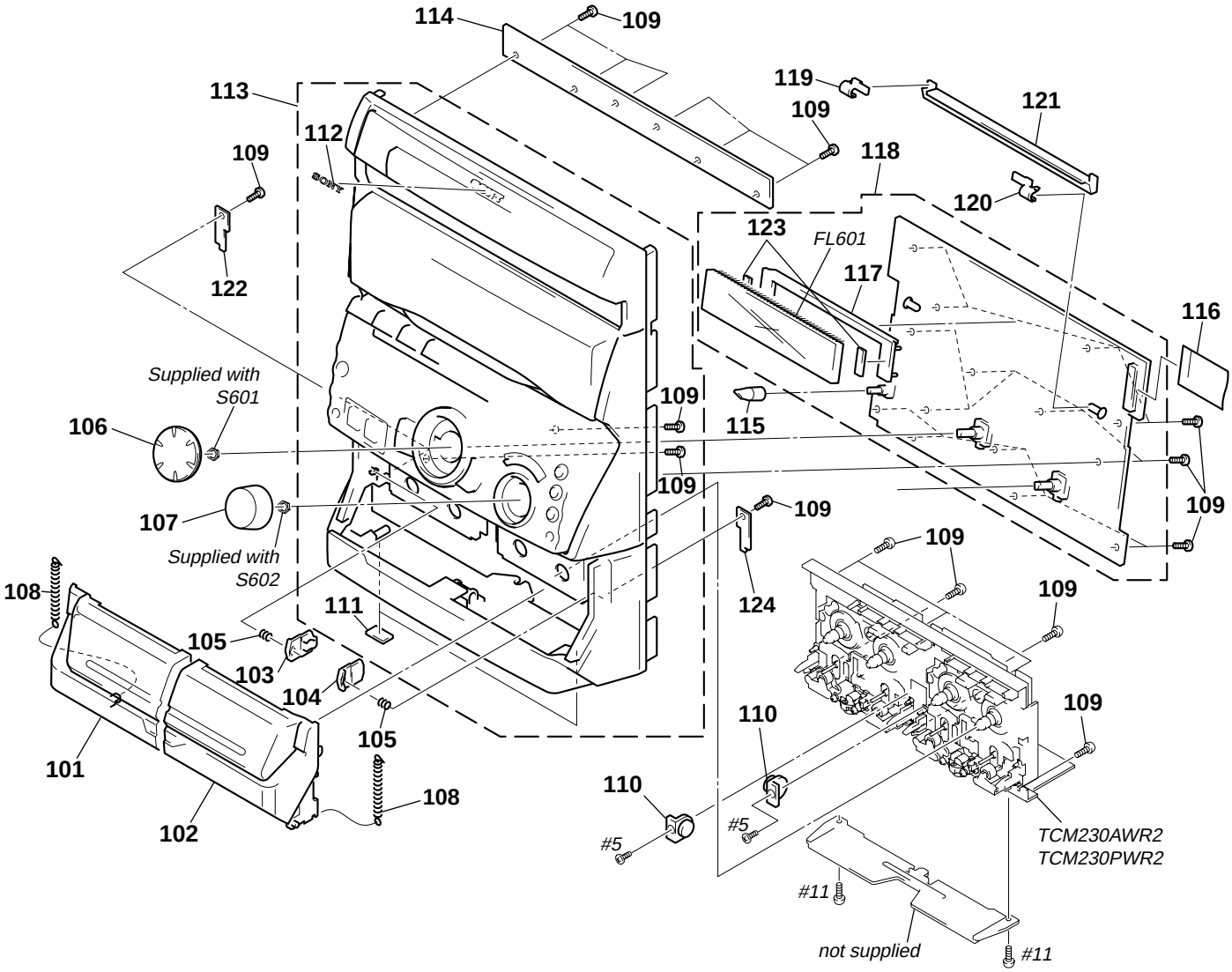


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
51	4-965-822-01	FOOT	
* 52	1-672-474-11	TRANS BOARD	
53	A-4419-149-A	MAIN BOARD, COMPLETE (EXCEPT TH, EA)	
53	A-4419-725-A	MAIN BOARD, COMPLETE (EA)	
53	A-4426-131-A	MAIN BOARD, COMPLETE (TH)	
54	A-4419-159-A	SURROUND BOARD, COMPLETE	
55	1-769-977-11	WIRE (FLAT TYPE)(13 CORE) (TH)	
55	1-773-009-11	WIRE (FLAT TYPE)(15 CORE) (150mm) (EXCEPT TH)	
56	1-773-024-11	WIRE (FLAT TYPE)(15 CORE) (320mm)	
* 57	3-703-244-00	BUSHING (2104), CORD (EXCEPT E,IA,TH)	
57	3-703-571-11	BUSHING (S) (4516), CORD (E,TH)	
57	4-966-266-01	BUSHING (S) (FBS002), CORD (IA)	
58	1-569-007-11	ADAPTOR, CONVERSION 2P (E,IA)	
58	1-569-008-21	ADAPTOR, CONVERSION 2P (EA,SP,MY,TW)	
58	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)	

Ref. No.	Part No.	Description	Remark
⚠59	1-575-651-11	CORD, POWER (EA,SP,HK,MY,TW)	
⚠59	1-575-653-11	CORD, POWER (E,IA,TH)	
60	1-773-042-11	WIRE (FLAT TYPE)(17 CORE)	
61	4-215-641-01	PANEL, BACK (VX8:EA)	
61	4-215-641-11	PANEL, BACK (VX8:SP,MY)	
61	4-215-641-21	PANEL, BACK (VX8:TW)	
61	4-215-641-31	PANEL, BACK (VX8:E)	
61	4-215-641-41	PANEL, BACK (VX8:IA)	
61	4-215-641-51	PANEL, BACK (VX8:HK)	
61	4-215-641-61	PANEL, BACK (VX8J:E)	
61	4-215-641-71	PANEL, BACK (VX8J:EA)	
61	4-215-641-81	PANEL, BACK (VX8:TH)	
62	3-701-822-01	HOLDER, WIRE	
63	4-985-642-01	CUSHION	
M901	1-763-072-11	FAN, D.C.	
⚠T951	1-433-556-11	TRANSFORMER, POWER	

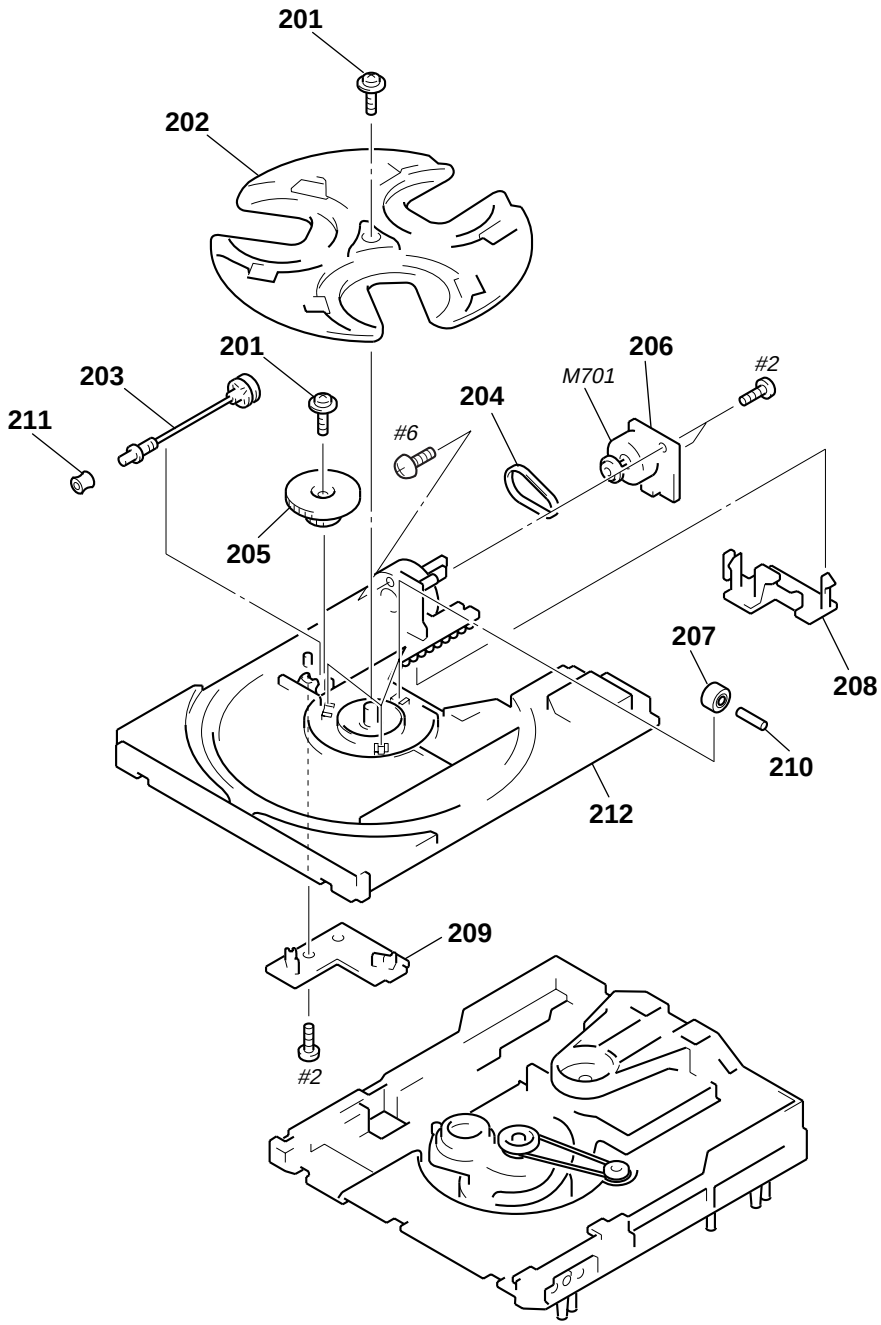
9-3. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
101	X-4950-697-1	HOLDER (L) ASSY, CASSETTE (SILVER)	
101	X-4950-976-1	HOLDER (L) ASSY, CASSETTE (GRAY)	
102	X-4950-698-1	HOLDER (R) ASSY, CASSETTE (SILVER)	
102	X-4950-977-1	HOLDER (R) ASSY, CASSETTE (GRAY)	
103	4-214-760-11	CATCHER (A), PUSH	
104	4-214-761-11	CATCHER (B), PUSH	
105	4-214-775-01	SPRING, PUSH CATCHER RETURN	
106	4-214-383-11	KNOB (JOG)(SILVER)	
106	4-214-383-51	KNOB (JOG)(GRAY)	
107	4-214-384-11	KNOB (VOL)(SILVER)	
107	4-214-384-51	KNOB (VOL)(GRAY)	
108	4-219-087-01	SPRING, TENSION	
109	4-951-620-01	SCREW (2.6X8), +BVTP	
110	4-215-062-01	DAMPER	
111	4-930-336-61	FOOT (FELT)	

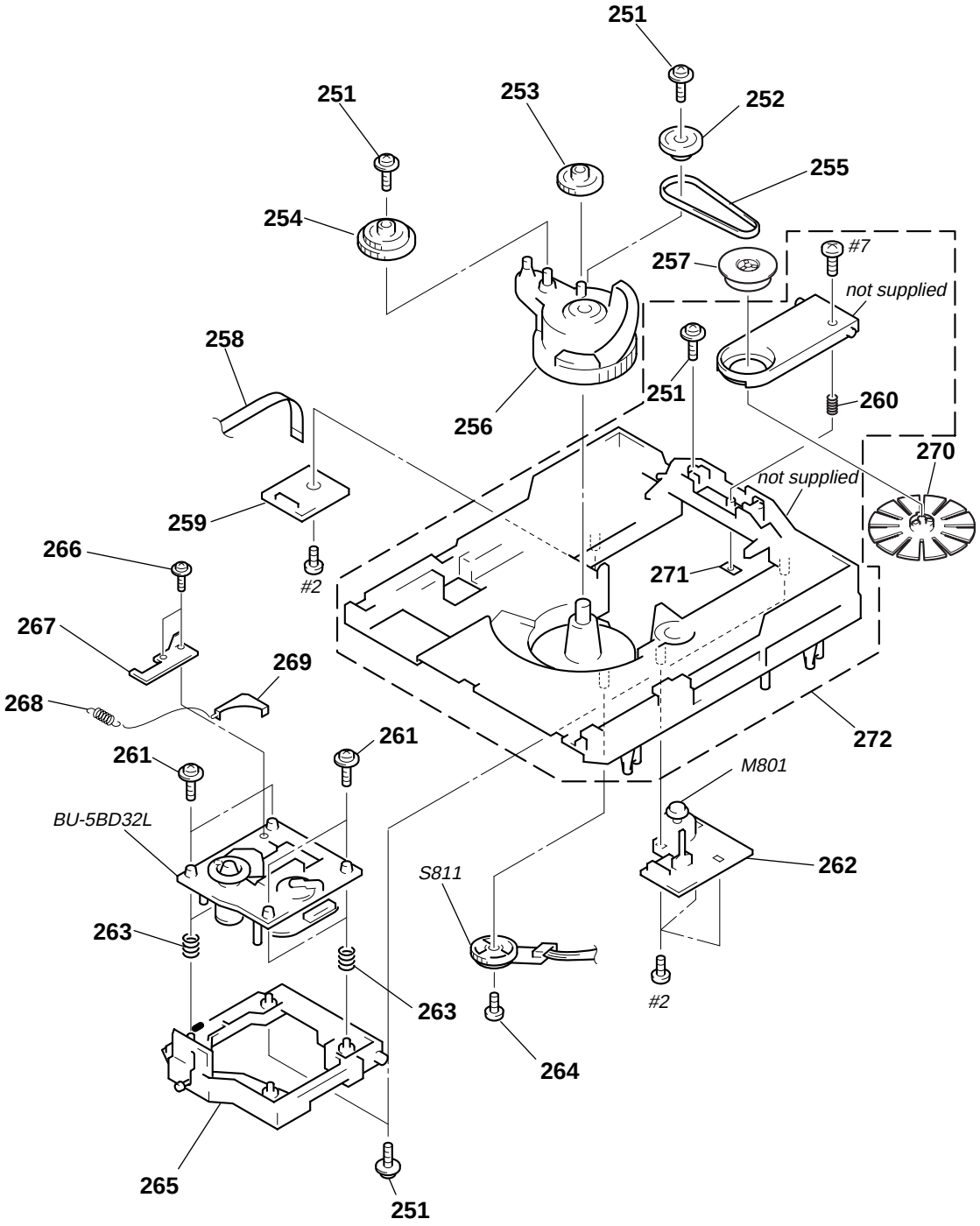
Ref. No.	Part No.	Description	Remark
112	4-962-708-71	EMBLEM (4-A), SONY	
113	X-4951-031-1	PANEL ASSY, FRONT (SILVER)	
113	X-4951-456-1	PANEL ASSY, FRONT (GRAY)	
* 114	A-4417-663-A	CD SW BOARD, COMPLETE	
115	4-214-385-11	KNOB (MIC)(SILVER)	
115	4-214-385-51	KNOB (MIC)(GRAY)	
116	1-773-223-11	WIRE (FLAT TYPE)(25 CORE)	
* 117	4-214-439-11	HOLDER, FL TUBE	
118	A-4419-146-A	PANEL BOARD, COMPLETE	
* 119	4-214-736-11	HOLDER (L)(LED)	
* 120	4-214-737-11	HOLDER (R)(LED)	
* 121	4-214-738-11	INDICATOR (ILLUMINATION 1)	
122	1-675-195-11	PUSH CATCH STOPPER (A)	
* 123	4-949-935-51	CUSHION (FL)	
124	1-675-196-11	PUSH CATCH STOPPER (B)	
FL601	1-517-831-31	INDICATOR TUBE, FLUORESCENT	

9-4. CD MECHANISM DECK SECTION-1 (CDM38L-5BD34L)



Ref. No.	Part No.	Description	Remark
201	4-981-789-21	BRACKET (2), YOKE	
202	4-977-945-63	TRAY (TURN)	
203	X-4946-665-1	SHAFT ASSY, WORM	
204	4-977-943-01	BELT (TURN) (1.2)	
205	4-977-956-01	WHEEL, WORM	
* 206	1-658-577-11	MOTOR (TURN) BOARD	
207	4-988-162-01	ROLLER	
208	4-977-941-01	BEARING (WORM)	
* 209	1-658-576-11	SENSOR BOARD	
210	4-934-376-01	SHAFT (ROLLER)	
211	4-981-187-01	COLLAR (WORM)	
212	4-977-944-01	TRAY (SLIDE)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	

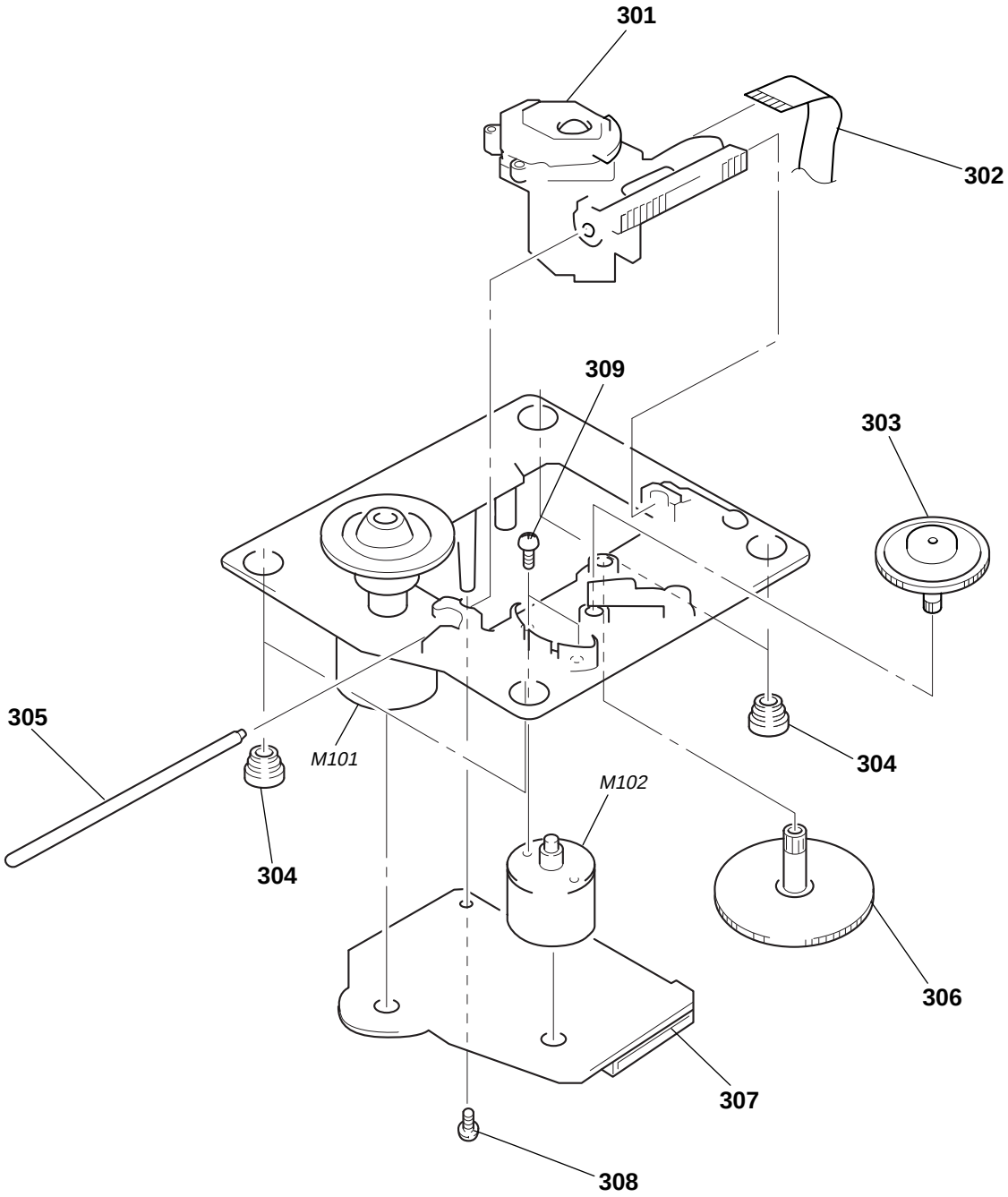
9-5. CD MECHANISM DECK SECTION-2 (CDM38L-5BD34L)



Ref. No.	Part No.	Description	Remark
251	4-981-789-11	BRACKET (2), YOKE	
252	4-977-954-01	PULLEY (SL)	
253	4-977-953-01	GEAR (SL-A)	
254	4-977-955-01	GEAR (SL-B)	
255	4-977-942-01	BELT (SL) (1.4)	
256	X-4946-667-1	CAM ASSY, BU	
257	1-452-925-21	MAGNET ASSY	
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)	
* 259	1-658-575-11	CONNECTOR BOARD	
260	4-900-743-01	SPRING, COMPRESSION	
261	4-985-672-01	SCREW (+PTPWHM2.6), FLOATING	
* 262	1-658-578-11	MOTOR (SLIDE) BOARD	

Ref. No.	Part No.	Description	Remark
263	4-982-447-01	SPRING (BU), COMPRESSION	
264	4-951-620-41	SCREW (2.6), +BVTP	
265	X-4949-570-1	HOLDER (BU) ASSY	
266	4-989-494-01	SCREW (SLIDER), STEP	
267	4-989-492-11	SLIDER (38)	
268	4-989-819-02	SPRING, TENSION	
269	4-989-491-11	COVER, LENS	
270	4-993-142-21	PULLEY (L), PRESS	
* 271	4-900-718-01	BRACKET (ADJUSTMENT)	
272	X-4950-020-2	CHASSIS (CDM) ASSY	
S811	1-473-335-11	ENCODER, ROTARY	
M801	A-4672-004-A	MOTOR ASSY (SLIDE)	

9-6. BASE UNIT SECTION (BU-5BD34L)



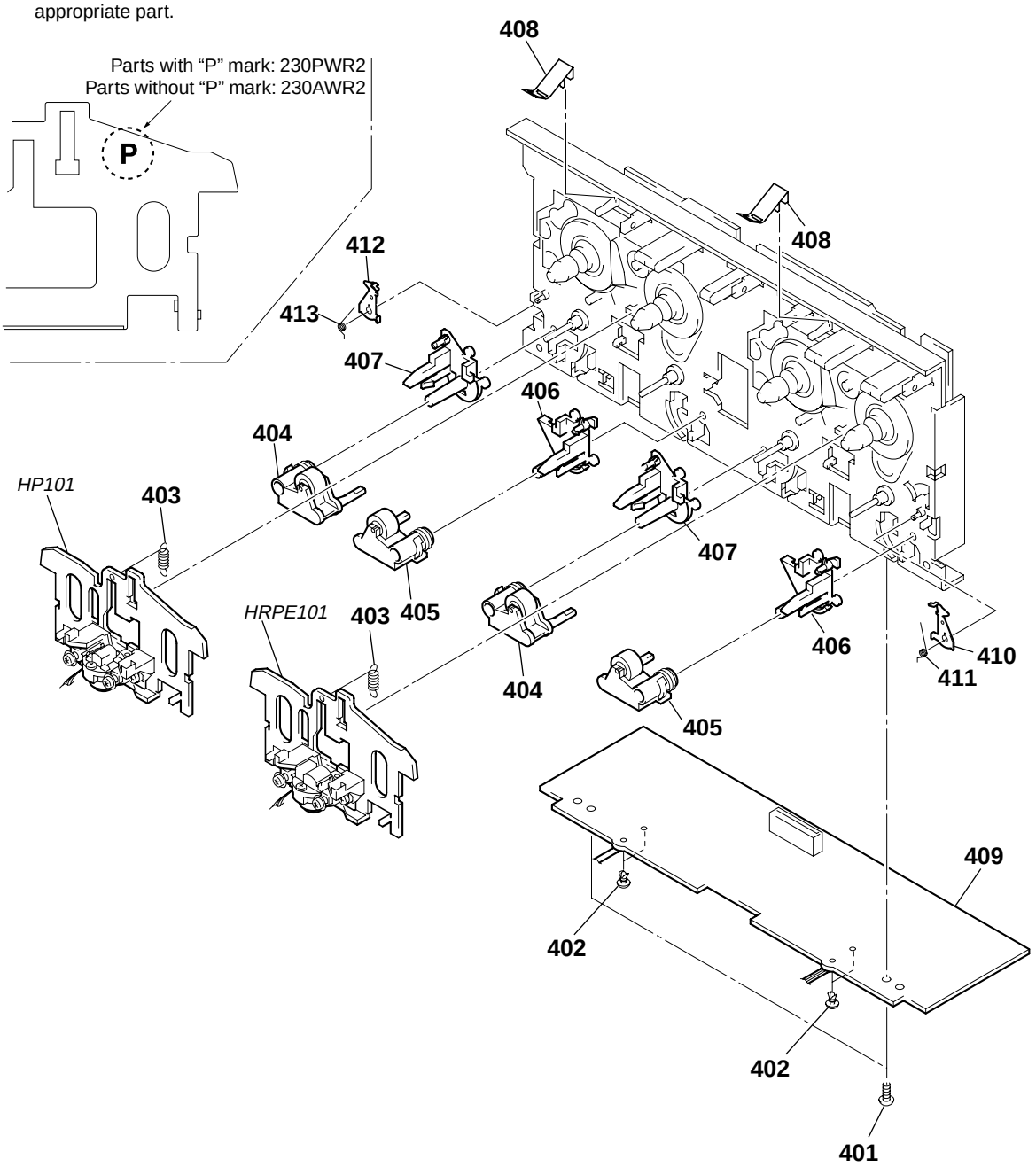
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP	
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
303	4-917-567-01	GEAR (M)	
304	4-951-940-01	INSULATOR (BU)	
305	4-917-565-01	SHAFT, SLED	

Ref. No.	Part No.	Description	Remark
306	4-917-564-01	GEAR (P), FLATNESS	
307	A-4724-640-A	BD BOARD, COMPLETE	
308	4-951-620-01	SCREW (2.6X8), +BVTP	
309	3-713-786-51	SCREW +P 2X3	
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

9-7. TC MECHANISM SECTION-1 (TCM230AWR2/230PWR2)

*NOTE: Two types of parts which are not interchangeable are available for the Head deck (A) ASSY and Head deck (B) ASSY. When replacing the parts, refer to the following figure, and use the appropriate part.

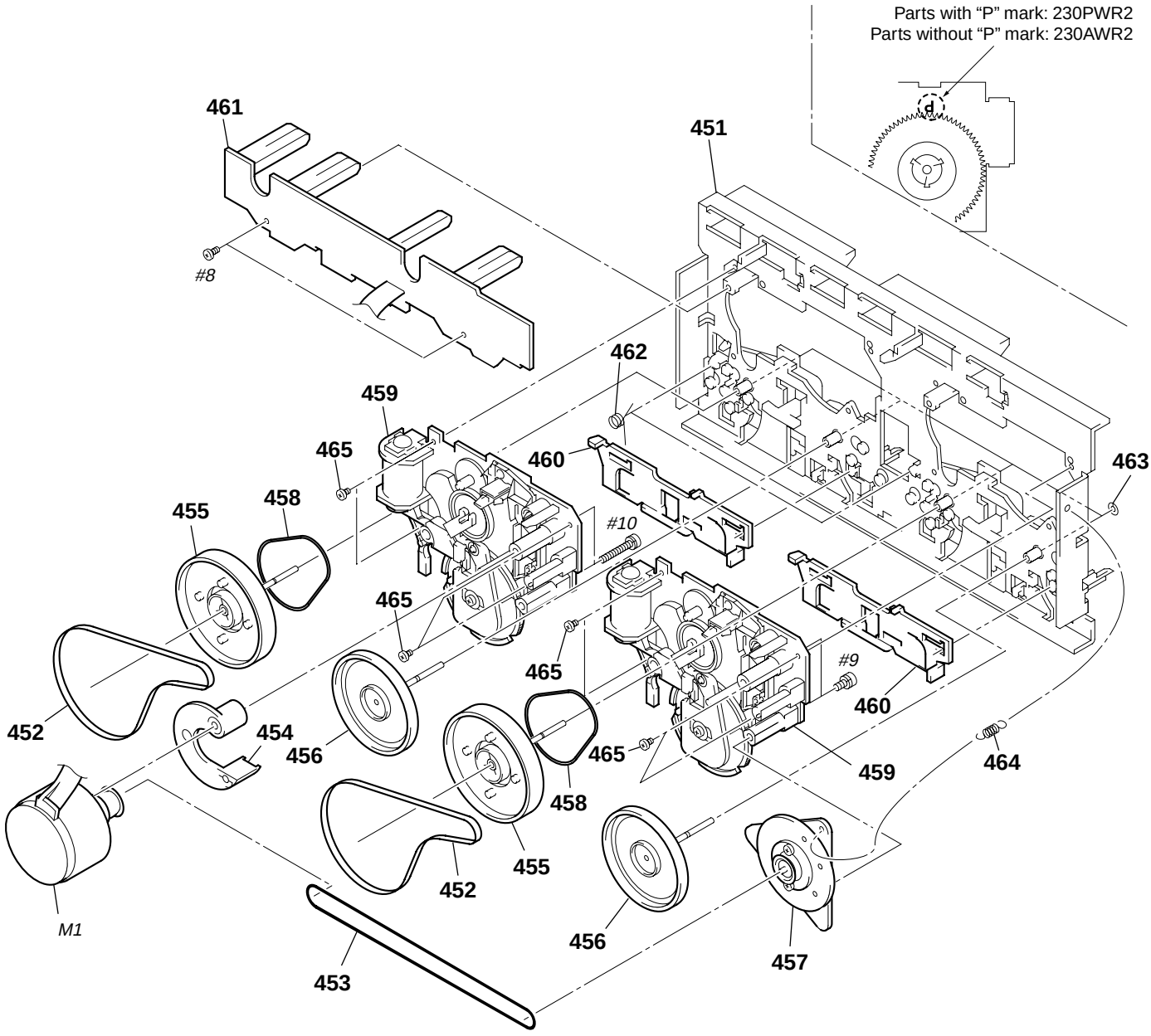


Ref. No.	Part No.	Description	Remark
401	3-376-464-11	SCREW(+PTT 2.6X6),GROUND POINT	
402	3-036-914-01	RIVET	
403	3-016-574-11	SPRING (HEAD), TENSION	
404	X-3374-156-4	PINCH LEVER (REV) ASSY	
405	X-3374-155-4	PINCH LEVER (FWD) ASSY	
406	3-016-564-01	BASE (PINCH LEVER FWD)	
407	3-016-565-01	BASE (PINCH LEVER REV)	
408	3-026-892-01	SPRING (CASSETTE), LEAF	
* 409	A-2007-731-A	AUDIO BOARD, COMPLETE	

Ref. No.	Part No.	Description	Remark
410	3-016-573-01	LEVER (EJECT PREVENTION R)	
411	3-032-810-02	SPRING (R), TORSION	
412	3-016-572-01	LEVER (EJECT PREVENTION L)	
413	3-032-809-02	SPRING (L), TORSION	
HP101	A-2056-681-B	DECK (A) ASSY, HEAD (230AWR2)(*NOTE)	
HP101	A-2056-683-B	DECK (A) ASSY, HEAD (230PWR2)(*NOTE)	
HRPE101	A-2056-682-B	DECK (B) ASSY, HEAD (230AWR2)(*NOTE)	
HRPE101	A-2056-684-B	DECK (B) ASSY, HEAD (230PWR2)(*NOTE)	

9-8. TC MECHANISM SECTION-2 (TCM230AWR2/230PWR2)

*NOTE: Two types of parts which are not interchangeable are available for the mechanical block assembly. When replacing the parts, refer to the following figure, and use the appropriate part.



Ref. No.	Part No.	Description	Remark
* 451	X-3374-214-3	CHASSIS ASSY, MAIN	
452	3-016-570-01	BELT (CAPSTAN)	
453	3-016-569-01	BELT (TENSION)	
454	3-017-360-01	BRACKET (MOTOR)	
455	X-3376-497-1	FLYWHEEL (FWD) ASSY	
456	X-3374-235-1	FLYWHEEL (REV) ASSY	
457	X-3374-238-1	PULLEY ASSY, TENSION	
458	3-024-405-01	BELT (FR2)	
459	A-2004-629-A	MECHANICAL BLOCK ASSY (230AWR2)(*NOTE)	

Ref. No.	Part No.	Description	Remark
459	A-2004-629-B	MECHANICAL BLOCK ASSY (230PWR2)(*NOTE)	
460	3-016-566-01	SLIDER, REVERSE	
* 461	A-2007-732-A	LEAF SW BOARD, COMPLETE	
462	3-016-575-11	SPRING, TORSION	
463	3-019-208-01	WASHER, STOPPER	
464	3-027-453-01	SPRING (GROUND), TENSION	
465	3-030-823-01	SCREW (+BVTT) (2X3.5)	
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN	

AUDIO

SECTION 10
ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H
- Abbreviation
  EA : Saudi Arabia model
  HK : Hong Kong model
  SP : Singapore model
  MY : Malaysia model
  TW : Taiwan model
  IA : Indonesia model
  TH : Thai model

Ref. No.	Part No.	Description				Remark
*	A-2007-731-A	AUDIO BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C301	1-162-289-31	CERAMIC	390PF	10%	50V	
C302	1-126-968-11	ELECT	100uF	20%	6.3V	
C303	1-162-282-31	CERAMIC	100PF	10%	50V	
C304	1-130-483-00	MYLAR	0.01uF	5%	50V	
C305	1-107-715-11	ELECT	22uF	20%	16V	
C311	1-162-289-31	CERAMIC	390PF	10%	50V	
C313	1-162-282-31	CERAMIC	100PF	10%	50V	
C314	1-130-487-00	MYLAR	0.022uF	5%	50V	
C315	1-126-233-11	ELECT	22uF	20%	50V	
C331	1-137-427-11	FILM	120PF	5%	50V	
C332	1-162-288-31	CERAMIC	330PF	10%	50V	
C333	1-162-209-31	CERAMIC	27PF	5%	50V	
C401	1-162-289-31	CERAMIC	390PF	10%	50V	
C402	1-126-968-11	ELECT	100uF	20%	6.3V	
C403	1-162-282-31	CERAMIC	100PF	10%	50V	
C404	1-130-483-00	MYLAR	0.01uF	5%	50V	
C405	1-107-715-11	ELECT	22uF	20%	16V	
C411	1-162-289-31	CERAMIC	390PF	10%	50V	
C413	1-162-282-31	CERAMIC	100PF	10%	50V	
C414	1-130-487-00	MYLAR	0.022uF	5%	50V	
C415	1-126-233-11	ELECT	22uF	20%	50V	
C431	1-137-427-11	FILM	120PF	5%	50V	
C432	1-162-288-31	CERAMIC	330PF	10%	50V	
C433	1-162-209-31	CERAMIC	27PF	5%	50V	
C601	1-104-396-11	ELECT	10uF	20%	16V	
C602	1-104-396-11	ELECT	10uF	20%	16V	
C611	1-104-396-11	ELECT	10uF	20%	16V	
C612	1-104-396-11	ELECT	10uF	20%	16V	
C621	1-137-150-11	FILM	0.01uF	5%	100V	
C622	1-126-961-11	ELECT	2.2uF	20%	50V	
C623	1-136-155-00	FILM	0.015uF	5%	50V	
C624	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C625	1-130-481-00	MYLAR	0.0068uF	5%	50V	
C627	1-124-903-11	ELECT	1uF	20%	50V	
C628	1-136-153-00	FILM	0.01uF	5%	50V	
C642	1-104-664-11	ELECT	47uF	20%	16V	
		< CONNECTOR >				
CN601	1-695-338-11	PIN, CONNECTOR (PC BOARD) 15P				

Ref. No.	Part No.	Description				Remark
		< IC >				
IC601	8-759-111-44	IC UPC4570C-1				
IC602	8-759-143-54	IC UPC1330HA				
IC611	8-759-111-44	IC UPC4570C-1				
		< COIL >				
L331	1-410-780-11	INDUCTOR	27mH			
L431	1-410-780-11	INDUCTOR	27mH			
L601	1-414-193-41	INDUCTOR	220uH			
L602	1-414-193-41	INDUCTOR	220uH			
		< TRANSISTOR >				
Q621	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q622	8-729-142-46	TRANSISTOR	2SC2001-LK			
Q623	8-729-801-93	TRANSISTOR	2SD1387			
		< RESISTOR >				
R301	1-247-881-00	CARBON	120K	5%	1/4W	
R302	1-249-409-11	CARBON	220	5%	1/4W	F
R303	1-249-433-11	CARBON	22K	5%	1/4W	
R304	1-247-889-00	CARBON	270K	5%	1/4W	
R305	1-247-858-11	CARBON	13K	5%	1/4W	
R311	1-247-881-00	CARBON	120K	5%	1/4W	
R312	1-247-807-31	CARBON	100	5%	1/4W	
R314	1-247-882-11	CARBON	130K	5%	1/4W	
R315	1-247-850-11	CARBON	6.2K	5%	1/4W	
R331	1-249-430-11	CARBON	12K	5%	1/4W	
R401	1-247-881-00	CARBON	120K	5%	1/4W	
R402	1-249-409-11	CARBON	220	5%	1/4W	F
R403	1-249-433-11	CARBON	22K	5%	1/4W	
R404	1-247-889-00	CARBON	270K	5%	1/4W	
R405	1-247-858-11	CARBON	13K	5%	1/4W	
R411	1-247-881-00	CARBON	120K	5%	1/4W	
R412	1-247-807-31	CARBON	100	5%	1/4W	
R414	1-247-882-11	CARBON	130K	5%	1/4W	
R415	1-247-850-11	CARBON	6.2K	5%	1/4W	
R431	1-249-430-11	CARBON	12K	5%	1/4W	
R601	1-249-409-11	CARBON	220	5%	1/4W	F
R602	1-249-409-11	CARBON	220	5%	1/4W	F
R608	1-249-409-11	CARBON	220	5%	1/4W	F
R609	1-249-433-11	CARBON	22K	5%	1/4W	
R611	1-249-409-11	CARBON	220	5%	1/4W	F
R612	1-249-409-11	CARBON	220	5%	1/4W	F
⚠R621	1-212-851-00	FUSIBLE	5.6	5%	1/4W	F

Ref. No.	Part No.	Description			Remark
⚠R622	1-212-851-00	FUSIBLE	5.6	5%	1/4W F
R623	1-249-432-11	CARBON	18K	5%	1/4W
R624	1-249-432-11	CARBON	18K	5%	1/4W
R625	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV311	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV341	1-241-768-11	RES, ADJ, CARBON 220K			
RV401	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV411	1-238-598-11	RES, ADJ, CARBON 2.2K			
RV441	1-241-768-11	RES, ADJ, CARBON 220K			
		< TRANSFORMER >			
T621	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			

****

	A-4724-640-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-346-11	CERAMIC CHIP	1uF		16V
C108	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C109	1-163-145-00	CERAMIC CHIP	0.0015uF	5%	50V
C110	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C115	1-126-607-11	ELECT CHIP	47uF	20%	4V
C116	1-126-607-11	ELECT CHIP	47uF	20%	4V
C117	1-126-209-11	ELECT CHIP	100uF	20%	4V
C118	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C119	1-163-110-00	CERAMIC CHIP	51PF	5%	50V
C120	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C121	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C122	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C123	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C126	1-124-779-00	ELECT CHIP	10uF	20%	16V
C130	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C140	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C141	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C151	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C153	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C154	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C156	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C157	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C159	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C161	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C162	1-128-065-11	ELECT CHIP	68uF	20%	10V
C170	1-163-038-91	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C171	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
CN101	1-770-706-11	CONNECTOR, FFC/FPC 23P			
CN102	1-777-937-11	CONNECTOR, FFC/FPC 16P			
		< IC >			
IC101	8-752-397-42	IC CXD3008Q			
IC102	8-759-549-28	IC BA5974FP-E2			
IC103	8-752-085-51	IC CXA2568M-T6			
IC104	8-759-398-25	IC TC7SH04F(TE85L)			
		< COIL >			
L101	1-414-234-22	INDUCTOR CHIP	0uH		
L102	1-410-377-31	INDUCTOR CHIP	4.7uH		
		< TRANSISTOR >			
Q101	8-729-010-08	TRANSISTOR MSB710-R			
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-91	RES,CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-073-00	METAL CHIP	10K	5%	1/10W
R106	1-216-049-91	RES,CHIP	1K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-121-91	RES,CHIP	1M	5%	1/10W
R110	1-216-295-91	SHORT	0		
R112	1-216-049-91	RES,CHIP	1K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-91	RES,CHIP	100K	5%	1/10W
R125	1-216-037-00	METAL CHIP	330	5%	1/10W
R126	1-216-037-00	METAL CHIP	330	5%	1/10W
R127	1-216-037-00	METAL CHIP	330	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R135	1-216-295-91	SHORT	0		
R136	1-216-295-91	SHORT	0		
R137	1-216-295-91	SHORT	0		
R138	1-216-295-91	SHORT	0		
R143	1-216-103-00	METAL CHIP	180K	5%	1/10W
R144	1-216-103-00	METAL CHIP	180K	5%	1/10W
R145	1-216-121-91	RES,CHIP	1M	5%	1/10W
R146	1-216-121-91	RES,CHIP	1M	5%	1/10W
R147	1-216-041-00	METAL CHIP	470	5%	1/10W
R148	1-216-001-00	METAL CHIP	10	5%	1/10W
R149	1-216-003-11	RES,CHIP	12	5%	1/10W
R150	1-216-073-00	METAL CHIP	10K	5%	1/10W
R154	1-216-025-91	RES,CHIP	100	5%	1/10W
R155	1-216-025-91	RES,CHIP	100	5%	1/10W
R156	1-216-025-91	RES,CHIP	100	5%	1/10W
R157	1-216-025-91	RES,CHIP	100	5%	1/10W
R158	1-216-111-00	METAL CHIP	390K	5%	1/10W
R159	1-216-089-91	RES,CHIP	47K	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

BD CD SW CONNECTOR LEAF SW

Ref. No.	Part No.	Description			Remark
R162	1-216-101-00	METAL CHIP	150K	5%	1/10W
R171	1-216-025-91	RES,CHIP	100	5%	1/10W
R172	1-216-025-91	RES,CHIP	100	5%	1/10W
R173	1-216-025-91	RES,CHIP	100	5%	1/10W
R175	1-216-025-91	RES,CHIP	100	5%	1/10W
R203	1-216-025-91	RES,CHIP	100	5%	1/10W
R204	1-216-025-91	RES,CHIP	100	5%	1/10W
R205	1-216-025-91	RES,CHIP	100	5%	1/10W
R206	1-216-295-91	SHORT	0		
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT SW)			

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*	A-4417-663-A	CD SW BOARD, COMPLETE	
		**********	
		< DIODE >	
D801	8-719-056-13	DIODE	SML79423C-TP15 (DISC 3)
D802	8-719-056-13	DIODE	SML79423C-TP15 (DISC 2)
D803	8-719-056-13	DIODE	SML79423C-TP15 (DISC 1)
D804	8-719-063-93	DIODE	SLR325VC-N-T32 (I/⏻)
		< RESISTOR >	

R801	1-216-049-91	RES,CHIP	1K	5%	1/10W
R802	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R803	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R804	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R805	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R806	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R807	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R808	1-216-022-00	METAL CHIP	75	5%	1/10W
R809	1-216-029-00	METAL CHIP	150	5%	1/10W
R810	1-216-022-00	METAL CHIP	75	5%	1/10W
R811	1-216-029-00	METAL CHIP	150	5%	1/10W
R812	1-216-022-00	METAL CHIP	75	5%	1/10W
R813	1-216-029-00	METAL CHIP	150	5%	1/10W
R814	1-216-043-91	RES,CHIP	560	5%	1/10W

		< SWITCH >	
S801	1-762-875-21	SWITCH, KEYBOARD (I/⏻)	
S802	1-762-875-21	SWITCH, KEYBOARD (DEMO (STANDBY))	
S803	1-762-875-21	SWITCH, KEYBOARD (DISC 1)	
S804	1-762-875-21	SWITCH, KEYBOARD (DISC 2)	
S805	1-762-875-21	SWITCH, KEYBOARD (DISC 3)	
S806	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP/EX-CHANGE)	
S807	1-762-875-21	SWITCH, KEYBOARD (⏏)	

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*	1-658-575-11	CONNECTOR BOARD	
		**********	
		< CONNECTOR >	
* CN701	1-568-946-11	PIN, CONNECTOR 8P	
CN702	1-750-413-11	CONNECTOR, FFC/FPC 8P	
		< TRANSISTOR >	
Q701	8-729-900-80	TRANSISTOR	DTC114ES
		< RESISTOR >	

R703	1-249-435-11	CARBON	33K	5%	1/4W
R704	1-249-429-11	CARBON	10K	5%	1/4W
R705	1-249-417-11	CARBON	1K	5%	1/4W F

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*	A-2007-732-A	LEAF SW BOARD, COMPLETE	
		**********	
		< CAPACITOR >	
C1001	1-107-716-11	ELECT	33uF 20% 10V
		< CONNECTOR >	
CN1001	1-568-860-11	SOCKET, CONNECTOR 17P	
CN1001	1-784-459-11	CONNECTOR, FFC/FPC 17P	
		< DIODE >	
D1001	8-719-911-19	DIODE	1SS119
D1002	8-719-911-19	DIODE	1SS119
		< HOLDER >	
* DM1001	1-784-581-11	HOLDER, CABLE (2.5MM PITCH) 4P	
		< IC >	
IC1001	8-749-014-38	IC PHOTO INTERRUPTER SG-264	
IC1002	8-749-014-38	IC PHOTO INTERRUPTER SG-264	
		< TRANSISTOR >	
Q1001	8-729-029-56	TRANSISTOR	DTA144ESA
		< RESISTOR >	

R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W F
R1002	1-249-409-11	CARBON	220	5%	1/4W F
R1003	1-249-414-11	CARBON	560	5%	1/4W F
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-856-00	CARBON	11K	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W F

		< VARIABLE RESISTOR >	
RV1001	1-241-785-11	RES, ADJ, CARBON 10K	
RV1002	1-241-785-11	RES, ADJ, CARBON 10K	
		< SWITCH >	
S1001	1-570-953-11	SWITCH, PUSH (1 KEY)(A PLAY)	
S1002	1-570-953-11	SWITCH, PUSH (1 KEY)(B PLAY)	
S1003	1-771-333-11	SWITCH, LEAF (A HALF)	
S1004	1-771-205-11	SWITCH, LEAF (A 120/70)	
S1005	1-771-205-11	SWITCH, LEAF (REC A)	

Ref. No.	Part No.	Description			Remark
S1006	1-771-333-11	SWITCH, LEAF (B HALF)			
S1008	1-771-205-11	SWITCH, LEAF (B 120/70)			
S1009	1-771-205-11	SWITCH, LEAF (REC B)			
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	A-4419-149-A	MAIN BOARD, COMPLETE (EXCEPT EA,TH)			
		**********			
	A-4419-725-A	MAIN BOARD, COMPLETE (EA)			
		**********			
	A-4426-131-A	MAIN BOARD, COMPLETE (TH)			
		**********			
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S			
		< CAPACITOR >			
C104	1-164-159-11	CERAMIC	0.1uF		50V
C111	1-137-195-11	FILM	0.56uF	5%	50V
C112	1-136-158-00	FILM	0.027uF	5%	50V
C113	1-136-167-00	FILM	0.15uF	5%	50V
C114	1-130-480-00	MYLAR	0.0056uF	5%	50V
C115	1-136-159-00	FILM	0.033uF	5%	50V
C116	1-130-473-00	MYLAR	0.0015uF	5%	50V
C117	1-136-153-00	FILM	0.01uF	5%	50V
C118	1-162-288-31	CERAMIC	330PF	10%	50V
C119	1-130-479-00	MYLAR	0.0047uF	5%	50V
C120	1-130-477-00	MYLAR	0.0033uF	5%	50V
C121	1-126-964-11	ELECT	10uF	20%	50V
C122	1-162-291-31	CERAMIC	560PF	10%	50V
C123	1-136-169-00	FILM	0.22uF	5%	50V
C124	1-136-169-00	FILM	0.22uF	5%	50V
C125	1-126-964-11	ELECT	10uF	20%	50V
C131	1-104-664-11	ELECT	47uF	20%	16V
C132	1-104-664-11	ELECT	47uF	20%	16V
C135	1-126-964-11	ELECT	10uF	20%	50V
C141	1-126-959-11	ELECT	0.47uF	20%	50V
C161	1-137-195-11	FILM	0.56uF	5%	50V
C162	1-136-158-00	FILM	0.027uF	5%	50V
C163	1-136-167-00	FILM	0.15uF	5%	50V
C164	1-130-480-00	MYLAR	0.0056uF	5%	50V
C165	1-136-159-00	FILM	0.033uF	5%	50V
C166	1-130-473-00	MYLAR	0.0015uF	5%	50V
C167	1-136-153-00	FILM	0.01uF	5%	50V
C168	1-162-288-31	CERAMIC	330PF	10%	50V
C169	1-130-479-00	MYLAR	0.0047uF	5%	50V
C170	1-130-477-00	MYLAR	0.0033uF	5%	50V
C171	1-126-964-11	ELECT	10uF	20%	50V
C172	1-162-291-31	CERAMIC	560PF	10%	50V
C173	1-136-169-00	FILM	0.22uF	5%	50V
C174	1-136-169-00	FILM	0.22uF	5%	50V
C175	1-126-964-11	ELECT	10uF	20%	50V
C176	1-136-495-11	FILM	0.068uF	5%	50V
C177	1-136-153-00	FILM	0.01uF	5%	50V
C181	1-161-494-00	CERAMIC	0.022uF		25V
C182	1-161-494-00	CERAMIC	0.022uF		25V
C183	1-126-964-11	ELECT	10uF	20%	50V
C184	1-126-964-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description			Remark
C193	1-126-964-11	ELECT	10uF	20%	50V
C197	1-162-306-11	CERAMIC	0.01uF	20%	16V
C301	1-126-960-11	ELECT	1uF	20%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-126-964-11	ELECT	10uF	20%	50V
C306	1-126-960-11	ELECT	1uF	20%	50V
C307	1-126-959-11	ELECT	0.47uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-137-194-81	FILM	0.47uF	5%	50V
C310	1-162-290-31	CERAMIC	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-959-11	ELECT	0.47uF	20%	50V
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-104-665-11	ELECT	100uF	20%	10V
C317	1-104-665-11	ELECT	100uF	20%	10V
C320	1-162-290-31	CERAMIC	470PF	10%	50V
C333	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C334	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C351	1-126-960-11	ELECT	1uF	20%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C355	1-126-964-11	ELECT	10uF	20%	50V
C356	1-126-960-11	ELECT	1uF	20%	50V
C357	1-126-959-11	ELECT	0.47uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-137-194-81	FILM	0.47uF	5%	50V
C382	1-104-665-11	ELECT	100uF	20%	10V
C390	1-104-656-11	ELECT	2200uF	20%	6.3V
C391	1-161-494-00	CERAMIC	0.022uF		25V
C392	1-126-916-11	ELECT	1000uF	20%	6.3V
C393	1-161-494-00	CERAMIC	0.022uF		25V
C394	1-126-925-11	ELECT	470uF	20%	10V
C396	1-126-961-11	ELECT	2.2uF	20%	50V
C397	1-126-961-11	ELECT	2.2uF	20%	50V
C410	1-126-963-11	ELECT	4.7uF	20%	50V
C411	1-162-306-11	CERAMIC	0.01uF	20%	16V
C412	1-107-717-11	ELECT	47uF	20%	50V
C432	1-104-665-11	ELECT	100uF	20%	10V
C433	1-126-961-11	ELECT	2.2uF	20%	50V
C437	1-126-968-11	ELECT	100uF	20%	50V
C501	1-126-964-11	ELECT	10uF	20%	50V
C502	1-164-159-11	CERAMIC	0.1uF		50V
C503	1-136-165-00	FILM	0.1uF	5%	50V
C504	1-126-926-11	ELECT	1000uF	20%	10V
C508	1-109-889-11	ELECT	1uF	20%	50V
C610	1-102-953-00	CERAMIC	18PF	5%	50V
C611	1-102-514-11	CERAMIC	22PF	5%	50V
C614	1-162-306-11	CERAMIC	0.01uF	20%	16V
C616	1-104-665-11	ELECT	100uF	20%	10V
C662	1-162-306-11	CERAMIC	0.01uF	20%	16V
C664	1-104-665-11	ELECT	100uF	20%	10V
C698	1-162-306-11	CERAMIC	0.01uF	20%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C699	1-104-665-11	ELECT	100uF	20%	10V
C801	1-126-963-11	ELECT	4.7uF	20%	50V
C802	1-162-290-31	CERAMIC	470PF	10%	50V
C803	1-162-282-31	CERAMIC	100PF	10%	50V
C804	1-104-665-11	ELECT	100uF	20%	10V
C807	1-136-495-11	FILM	0.068uF	5%	50V
C808	1-136-495-11	FILM	0.068uF	5%	50V
C809	1-128-560-11	ELECT	22uF	20%	100V
C810	1-128-578-11	ELECT	1uF	20%	100V
C811	1-162-306-11	CERAMIC	0.01uF	20%	16V
C812	1-162-306-11	CERAMIC	0.01uF	20%	16V
C841	1-127-811-11	ELECT	3300uF	20%	50V
C842	1-127-814-11	ELECT	3300uF	20%	80V
C843	1-136-165-00	FILM	0.1uF	5%	50V
C844	1-130-777-00	FILM	0.1uF	10%	100V
C851	1-126-963-11	ELECT	4.7uF	20%	50V
C852	1-162-290-31	CERAMIC	470PF	10%	50V
C853	1-162-282-31	CERAMIC	100PF	10%	50V
C854	1-104-665-11	ELECT	100uF	20%	10V
C857	1-136-495-11	FILM	0.068uF	5%	50V
C858	1-136-495-11	FILM	0.068uF	5%	50V
C859	1-128-560-11	ELECT	22uF	20%	100V
C881	1-126-967-11	ELECT	47uF	20%	50V
C891	1-127-811-11	ELECT	3300uF	20%	50V
C892	1-127-814-11	ELECT	3300uF	20%	80V
C893	1-136-165-00	FILM	0.1uF	5%	50V
C894	1-130-777-00	FILM	0.1uF	10%	100V
C901	1-136-165-00	FILM	0.1uF	5%	50V
C902	1-126-939-11	ELECT	10000uF	20%	16V
C903	1-126-933-11	ELECT	100uF	20%	16V
C904	1-104-664-11	ELECT	47uF	20%	16V
C905	1-104-665-11	ELECT	100uF	20%	10V
C906	1-136-165-00	FILM	0.1uF	5%	50V
C907	1-128-548-11	ELECT	4700uF	20%	25V
C909	1-126-964-11	ELECT	10uF	20%	50V
C910	1-104-665-11	ELECT	100uF	20%	10V
C911	1-126-964-11	ELECT	10uF	20%	50V
C912	1-126-926-11	ELECT	1000uF	20%	10V
C913	1-126-964-11	ELECT	10uF	20%	50V
C914	1-126-767-11	ELECT	1000uF	20%	16V
C915	1-104-664-11	ELECT	47uF	20%	16V
C916	1-162-306-11	CERAMIC	0.01uF	20%	16V
C917	1-126-933-11	ELECT	100uF	20%	16V
C921	1-104-656-11	ELECT	2200uF	20%	6.3V
C922	1-126-964-11	ELECT	10uF	20%	50V
C923	1-126-926-11	ELECT	1000uF	20%	10V
C951	1-136-165-00	FILM	0.1uF	5%	50V
C952	1-126-768-11	ELECT	2200uF	20%	16V
C953	1-126-933-11	ELECT	100uF	20%	16V
C955	1-104-665-11	ELECT	100uF	20%	10V
C956	1-136-165-00	FILM	0.1uF	5%	50V
		< CONNECTOR >			
CN303	1-784-776-11	CONNECTOR, FFC 15P			
CN304	1-784-778-11	CONNECTOR, FFC 17P			
* CN371	1-568-832-11	SOCKET, CONNECTOR 13P (VX8:TH)			
CN371	1-568-834-11	SOCKET, CONNECTOR 15P (EXCEPT VX8:TH)			
CN391	1-750-745-11	CONNECTOR, FFC/FPC 13P			
CN392	1-785-334-11	PIN, CONNECTOR (LIGHT ANGLE)8P			
CN393	1-785-335-11	PIN, CONNECTOR (LIGHT ANGLE)9P			
* CN403	1-564-518-11	PLUG, CONNECTOR 3P			
* CN501	1-568-841-11	SOCKET, CONNECTOR 25P			
		< DIODE >			
D141	8-719-911-19	DIODE 1SS119-25			
D191	8-719-911-19	DIODE 1SS119-25			
D331	8-719-911-19	DIODE 1SS119-25			
D333	8-719-911-19	DIODE 1SS119-25			
D334	8-719-911-19	DIODE 1SS119-25			
D335	8-719-911-19	DIODE 1SS119-25			
D401	8-719-911-19	DIODE 1SS119-25			
D403	8-719-911-19	DIODE 1SS119-25			
D405	8-719-024-99	DIODE 11ES2-NTA2B			
D406	8-719-024-99	DIODE 11ES2-NTA2B			
D407	8-719-024-99	DIODE 11ES2-NTA2B			
D411	8-719-911-19	DIODE 1SS119-25			
D501	8-719-024-99	DIODE 11ES2-NTA2B			
D502	8-719-911-19	DIODE 1SS119-25			
D503	8-719-911-19	DIODE 1SS119-25			
D504	8-719-911-19	DIODE 1SS119-25			
D505	8-719-911-19	DIODE 1SS119-25			
D506	8-719-911-19	DIODE 1SS119-25			
D507	8-719-024-99	DIODE 11ES2-NTA2B			
D509	8-719-911-19	DIODE 1SS119-25			
D607	8-719-911-19	DIODE 1SS119-25			
D644	8-719-911-19	DIODE 1SS119-25			
D801	8-719-911-19	DIODE 1SS119-25			
D802	8-719-118-97	DIODE RD16F-T7B2			
D803	8-719-911-19	DIODE 1SS119-25			
D831	8-719-302-37	DIODE RBV-602			
D832	8-719-060-53	DIODE RBV-2506			
D851	8-719-911-19	DIODE 1SS119-25			
D852	8-719-118-97	DIODE RD16F-T7B2			
D881	8-719-911-19	DIODE 1SS119-25			
D901	8-719-975-85	DIODE ERB83-004			
D902	8-719-975-85	DIODE ERB83-004			
D903	8-719-975-85	DIODE ERB83-004			
D904	8-719-975-85	DIODE ERB83-004			
D905	8-719-933-36	DIODE HZS6B1L			
D906	8-719-911-19	DIODE 1SS119-25			
D907	8-719-024-99	DIODE 11ES2-NTA2B			
D908	8-719-024-99	DIODE 11ES2-NTA2B			
D909	8-719-024-99	DIODE 11ES2-NTA2B			
D910	8-719-024-99	DIODE 11ES2-NTA2B			
D915	8-719-935-69	DIODE HZS11B1LTA			
D917	8-719-911-19	DIODE 1SS119-25			
D918	8-719-024-99	DIODE 11ES2-NTA2B			
D919	8-719-911-19	DIODE 1SS119-25			
D921	8-719-911-19	DIODE 1SS119-25			
D922	8-719-911-19	DIODE 1SS119-25			
D923	8-719-911-19	DIODE 1SS119-25			
D924	8-719-024-99	DIODE 11ES2-NTA2B			
D925	8-719-024-99	DIODE 11ES2-NTA2B			

Ref. No.	Part No.	Description	Remark
		< FERRITE BEAD >	
FB391	1-412-493-21	INDUCTOR	
FB392	1-412-493-21	INDUCTOR	
		< IC >	
IC101	8-759-571-54	IC M62493FP	
IC181	8-759-634-51	IC M5218AP	
IC301	8-759-495-26	IC HA12215	
IC381	8-749-923-04	IC TOTX178	
IC501	8-759-588-91	IC M30622MA-A09FP	
IC502	8-759-635-63	IC M51943BSL	
IC801	8-749-015-37	IC STK411-240E	
IC901	8-759-604-86	IC M5F7807L	
IC902	8-759-231-53	IC TA7805S	
IC903	8-759-088-08	IC UPC7812AHF	
IC904	8-759-231-53	IC TA7805S	
		< JACK >	
J101	1-774-411-11	JACK, PIN 6P (VIDEO AUDIO IN, MD IN/OUT)	
J191	1-774-785-11	JACK, PIN 1P (SUPER WOOFER)	
		< COIL >	
L381	1-410-521-11	INDUCTOR 100uH	
L392	1-410-521-11	INDUCTOR 100uH	
L501	1-410-509-11	INDUCTOR 10uH	
		< TRANSISTOR >	
Q111	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q112	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q161	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q162	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q163	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q181	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q191	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q192	8-729-900-63	TRANSISTOR DTA124ES	
Q201	8-729-900-36	TRANSISTOR DTC124ES	
Q251	8-729-900-36	TRANSISTOR DTC124ES	
Q331	8-729-118-00	TRANSISTOR 2SB1116-L	
Q332	8-729-900-80	TRANSISTOR DTC114ES	
Q333	8-729-118-00	TRANSISTOR 2SB1116-L	
Q334	8-729-900-80	TRANSISTOR DTC114ES	
Q335	8-729-900-80	TRANSISTOR DTC114ES	
Q336	8-729-116-59	TRANSISTOR 2SB1068TP	
Q337	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q338	8-729-422-57	TRANSISTOR UN4111	
Q339	8-729-900-80	TRANSISTOR DTC114ES	
Q340	8-729-116-59	TRANSISTOR 2SB1068TP	
Q341	8-729-045-21	TRANSISTOR 2SD1513TP-LK	
Q342	8-729-422-57	TRANSISTOR UN4111	
Q343	8-729-900-80	TRANSISTOR DTC114ES	
Q401	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q402	8-729-111-29	TRANSISTOR 2SD1616A-K	
Q411	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q412	8-729-900-63	TRANSISTOR DTA124ES	
Q431	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q432	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q433	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q434	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q435	8-729-900-36	TRANSISTOR DTC124ES	
Q436	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q437	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q439	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q471	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q501	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q508	8-729-900-63	TRANSISTOR DTA124ES	
Q509	8-729-900-63	TRANSISTOR DTA124ES	
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q803	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q804	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q831	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q832	8-729-119-79	TRANSISTOR 2SC2785-FEK	
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q881	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q901	8-729-209-15	TRANSISTOR 2SD2012	
Q902	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q903	8-729-900-36	TRANSISTOR DTC124ES	
Q904	8-729-900-36	TRANSISTOR DTC124ES	
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP	
Q907	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q908	8-729-900-36	TRANSISTOR DTC124ES	
Q909	8-729-026-68	TRANSISTOR 2SD2525(TP)	
Q911	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q912	8-729-900-36	TRANSISTOR DTC124ES	
Q913	8-729-119-78	TRANSISTOR 2SC403SP-51	
Q914	8-729-119-77	TRANSISTOR 2SA1175-FEK	
Q923	8-729-900-36	TRANSISTOR DTC124ES	
Q951	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q952	8-729-119-77	TRANSISTOR 2SA1175-FEK	
		< RESISTOR >	
R101	1-249-417-11	CARBON 1K 5% 1/4W	F
R102	1-249-417-11	CARBON 1K 5% 1/4W	F
R103	1-249-417-11	CARBON 1K 5% 1/4W	F
R111	1-249-429-11	CARBON 10K 5% 1/4W	
R112	1-247-895-00	CARBON 470K 5% 1/4W	
R113	1-247-894-11	CARBON 430K 5% 1/4W	
R114	1-249-415-11	CARBON 680 5% 1/4W	F
R115	1-249-433-11	CARBON 22K 5% 1/4W	
R116	1-247-887-00	CARBON 220K 5% 1/4W	
R117	1-249-429-11	CARBON 10K 5% 1/4W	
R118	1-249-437-11	CARBON 47K 5% 1/4W	
R119	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R120	1-249-441-11	CARBON 100K 5% 1/4W	
R121	1-249-429-11	CARBON 10K 5% 1/4W	
R124	1-249-433-11	CARBON 22K 5% 1/4W	F
R125	1-247-843-11	CARBON 3.3K 5% 1/4W	
R126	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R130	1-249-433-11	CARBON 22K 5% 1/4W	
R131	1-247-807-31	CARBON 100 5% 1/4W	
R132	1-247-807-31	CARBON 100 5% 1/4W	
R133	1-247-807-31	CARBON 100 5% 1/4W	

MAIN

Ref. No.	Part No.	Description			Remark
R141	1-249-433-11	CARBON	22K	5%	1/4W
R142	1-249-433-11	CARBON	22K	5%	1/4W
R143	1-249-417-11	CARBON	1K	5%	1/4W F
R144	1-249-441-11	CARBON	100K	5%	1/4W
R145	1-247-903-00	CARBON	1M	5%	1/4W
R151	1-249-417-11	CARBON	1K	5%	1/4W F
R152	1-249-417-11	CARBON	1K	5%	1/4W F
R153	1-249-417-11	CARBON	1K	5%	1/4W F
R161	1-249-429-11	CARBON	10K	5%	1/4W
R162	1-247-895-00	CARBON	470K	5%	1/4W
R163	1-247-894-11	CARBON	430K	5%	1/4W
R164	1-249-415-11	CARBON	680	5%	1/4W F
R165	1-249-433-11	CARBON	22K	5%	1/4W
R166	1-247-887-00	CARBON	220K	5%	1/4W
R167	1-249-429-11	CARBON	10K	5%	1/4W
R168	1-249-437-11	CARBON	47K	5%	1/4W
R169	1-249-421-11	CARBON	2.2K	5%	1/4W F
R170	1-249-441-11	CARBON	100K	5%	1/4W
R171	1-249-429-11	CARBON	10K	5%	1/4W
R178	1-249-421-11	CARBON	2.2K	5%	1/4W F
R181	1-249-429-11	CARBON	10K	5%	1/4W
R182	1-249-417-11	CARBON	1K	5%	1/4W F
R183	1-249-425-11	CARBON	4.7K	5%	1/4W F
R184	1-249-429-11	CARBON	10K	5%	1/4W
R185	1-249-441-11	CARBON	100K	5%	1/4W
R186	1-249-429-11	CARBON	10K	5%	1/4W
R187	1-249-429-11	CARBON	10K	5%	1/4W
R188	1-249-429-11	CARBON	10K	5%	1/4W
R190	1-249-441-11	CARBON	100K	5%	1/4W
R196	1-249-417-11	CARBON	1K	5%	1/4W F
R197	1-249-441-11	CARBON	100K	5%	1/4W
R198	1-249-417-11	CARBON	1K	5%	1/4W F
R199	1-249-429-11	CARBON	10K	5%	1/4W
R201	1-247-888-11	CARBON	240K	5%	1/4W
R202	1-247-903-00	CARBON	1M	5%	1/4W
R211	1-249-441-11	CARBON	100K	5%	1/4W
R212	1-249-441-11	CARBON	100K	5%	1/4W
R251	1-247-888-11	CARBON	240K	5%	1/4W
R252	1-247-903-00	CARBON	1M	5%	1/4W
R261	1-249-441-11	CARBON	100K	5%	1/4W
R262	1-249-441-11	CARBON	100K	5%	1/4W
R301	1-249-435-11	CARBON	33K	5%	1/4W
R302	1-249-421-11	CARBON	2.2K	5%	1/4W F
R303	1-247-807-31	CARBON	100	5%	1/4W
R304	1-247-807-31	CARBON	100	5%	1/4W
R305	1-249-421-11	CARBON	2.2K	5%	1/4W F
R306	1-249-428-11	CARBON	8.2K	5%	1/4W F
R307	1-249-428-11	CARBON	8.2K	5%	1/4W F
R308	1-249-425-11	CARBON	4.7K	5%	1/4W F
R309	1-249-433-11	CARBON	22K	5%	1/4W
R311	1-247-903-00	CARBON	1M	5%	1/4W
R312	1-247-884-11	CARBON	160K	5%	1/4W
R313	1-249-441-11	CARBON	100K	5%	1/4W
R315	1-249-429-11	CARBON	10K	5%	1/4W
R316	1-249-432-11	CARBON	18K	5%	1/4W
R317	1-249-429-11	CARBON	10K	5%	1/4W
R318	1-249-429-11	CARBON	10K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R319	1-247-893-11	CARBON	390K	5%	1/4W
R321	1-249-422-11	CARBON	2.7K	5%	1/4W F
R322	1-249-428-11	CARBON	8.2K	5%	1/4W F
R324	1-247-876-11	CARBON	75K	5%	1/4W
R325	1-247-876-11	CARBON	75K	5%	1/4W
R326	1-249-437-11	CARBON	47K	5%	1/4W
R327	1-249-437-11	CARBON	47K	5%	1/4W
R328	1-249-437-11	CARBON	47K	5%	1/4W
R329	1-249-417-11	CARBON	1K	5%	1/4W F
R330	1-249-425-11	CARBON	4.7K	5%	1/4W F
R331	1-249-425-11	CARBON	4.7K	5%	1/4W F
R332	1-249-415-11	CARBON	680	5%	1/4W F
R333	1-249-421-11	CARBON	2.2K	5%	1/4W F
R334	1-249-415-11	CARBON	680	5%	1/4W F
R335	1-249-421-11	CARBON	2.2K	5%	1/4W F
R336	1-249-437-11	CARBON	47K	5%	1/4W
R337	1-249-417-11	CARBON	1K	5%	1/4W F
R338	1-249-411-11	CARBON	330	5%	1/4W
R339	1-249-437-11	CARBON	47K	5%	1/4W
R340	1-249-437-11	CARBON	47K	5%	1/4W
R341	1-249-411-11	CARBON	330	5%	1/4W
R342	1-249-437-11	CARBON	47K	5%	1/4W
R343	1-249-417-11	CARBON	1K	5%	1/4W F
R351	1-249-435-11	CARBON	33K	5%	1/4W
R352	1-249-421-11	CARBON	2.2K	5%	1/4W F
R353	1-247-807-31	CARBON	100	5%	1/4W
R354	1-247-807-31	CARBON	100	5%	1/4W
R355	1-249-421-11	CARBON	2.2K	5%	1/4W F
R356	1-249-428-11	CARBON	8.2K	5%	1/4W F
R357	1-249-428-11	CARBON	8.2K	5%	1/4W F
R358	1-249-425-11	CARBON	4.7K	5%	1/4W F
R359	1-249-435-11	CARBON	33K	5%	1/4W
R391	1-249-422-11	CARBON	2.7K	5%	1/4W
R392	1-249-422-11	CARBON	2.7K	5%	1/4W
R393	1-249-426-11	CARBON	5.6K	5%	1/4W
R394	1-249-426-11	CARBON	5.6K	5%	1/4W
R395	1-247-867-11	CARBON	33K	5%	1/4W
R406	1-249-437-11	CARBON	47K	5%	1/4W
R407	1-249-437-11	CARBON	47K	5%	1/4W
R408	1-249-425-11	CARBON	4.7K	5%	1/4W F
R409	1-249-441-11	CARBON	100K	5%	1/4W
R410	1-249-421-11	CARBON	2.2K	5%	1/4W F
⚠R411	1-216-482-11	METAL OXIDE	1.8K	5%	3W F
R413	1-249-402-11	CARBON	56	5%	1/4W F
R414	1-249-417-11	CARBON	1K	5%	1/4W F
R415	1-249-429-11	CARBON	10K	5%	1/4W
R416	1-249-437-11	CARBON	47K	5%	1/4W
R417	1-249-417-11	CARBON	1K	5%	1/4W F
R421	1-260-090-11	CARBON	180	5%	1/2W
R422	1-260-090-11	CARBON	180	5%	1/2W
R431	1-249-438-11	CARBON	56K	5%	1/4W
R432	1-249-437-11	CARBON	47K	5%	1/4W
R434	1-249-433-11	CARBON	22K	5%	1/4W
R435	1-249-435-11	CARBON	33K	5%	1/4W
R437	1-249-429-11	CARBON	10K	5%	1/4W
R438	1-249-429-11	CARBON	10K	5%	1/4W
R439	1-249-425-11	CARBON	4.7K	5%	1/4W F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R440	1-249-429-11	CARBON	10K	5%	1/4W
R441	1-249-435-11	CARBON	33K	5%	1/4W
R443	1-249-417-11	CARBON	1K	5%	1/4W F
R471	1-260-090-11	CARBON	180	5%	1/2W
R472	1-260-090-11	CARBON	180	5%	1/2W
R473	1-249-402-11	CARBON	56	5%	1/4W F
R474	1-249-417-11	CARBON	1K	5%	1/4W F
R481	1-260-090-11	CARBON	180	5%	1/2W
R482	1-260-090-11	CARBON	180	5%	1/2W
R483	1-260-090-11	CARBON	180	5%	1/2W
R484	1-260-090-11	CARBON	180	5%	1/2W
R501	1-249-413-11	CARBON	470	5%	1/4W F
R502	1-249-425-11	CARBON	4.7K	5%	1/4W F
R503	1-249-437-11	CARBON	47K	5%	1/4W
R504	1-249-437-11	CARBON	47K	5%	1/4W
R505	1-249-429-11	CARBON	10K	5%	1/4W
R508	1-249-417-11	CARBON	1K	5%	1/4W F
R509	1-249-441-11	CARBON	100K	5%	1/4W
R521	1-249-425-11	CARBON	4.7K	5%	1/4W F
R522	1-249-417-11	CARBON	1K	5%	1/4W F
R523	1-249-425-11	CARBON	4.7K	5%	1/4W F
R524	1-249-407-11	CARBON	150	5%	1/4W F
				(E,MY,SP,HK,TW,IA)	
R524	1-249-425-11	CARBON	4.7K	5%	1/4W F
					(EA)
R527	1-249-429-11	CARBON	10K	5%	1/4W
R536	1-249-429-11	CARBON	10K	5%	1/4W
R550	1-247-843-11	CARBON	3.3K	5%	1/4W
R551	1-249-429-11	CARBON	10K	5%	1/4W
R567	1-247-807-31	CARBON	100	5%	1/4W
R568	1-249-429-11	CARBON	10K	5%	1/4W
R569	1-249-429-11	CARBON	10K	5%	1/4W
R570	1-249-429-11	CARBON	10K	5%	1/4W
R571	1-249-429-11	CARBON	10K	5%	1/4W
R577	1-249-429-11	CARBON	10K	5%	1/4W
R610	1-247-891-00	CARBON	330K	5%	1/4W
R617	1-249-429-11	CARBON	10K	5%	1/4W
R618	1-247-807-31	CARBON	100	5%	1/4W
R622	1-249-425-11	CARBON	4.7K	5%	1/4W F
R626	1-247-807-31	CARBON	100	5%	1/4W
R627	1-247-807-31	CARBON	100	5%	1/4W
R629	1-247-807-31	CARBON	100	5%	1/4W
R630	1-247-807-31	CARBON	100	5%	1/4W
R636	1-247-807-31	CARBON	100	5%	1/4W
R639	1-247-807-31	CARBON	100	5%	1/4W
R640	1-247-807-31	CARBON	100	5%	1/4W
R642	1-247-807-31	CARBON	100	5%	1/4W
R643	1-247-807-31	CARBON	100	5%	1/4W
R649	1-247-807-31	CARBON	100	5%	1/4W
R650	1-247-807-31	CARBON	100	5%	1/4W
R651	1-247-807-31	CARBON	100	5%	1/4W
R652	1-247-807-31	CARBON	100	5%	1/4W
R653	1-247-807-31	CARBON	100	5%	1/4W
R654	1-247-807-31	CARBON	100	5%	1/4W
R655	1-247-807-31	CARBON	100	5%	1/4W
R659	1-247-807-31	CARBON	100	5%	1/4W
R660	1-247-807-31	CARBON	100	5%	1/4W

Ref. No.	Part No.	Description			Remark
R661	1-247-807-31	CARBON	100	5%	1/4W
R663	1-247-807-31	CARBON	100	5%	1/4W
R665	1-247-807-31	CARBON	100	5%	1/4W
R666	1-247-807-31	CARBON	100	5%	1/4W
R667	1-247-807-31	CARBON	100	5%	1/4W
R668	1-247-807-31	CARBON	100	5%	1/4W
R669	1-247-807-31	CARBON	100	5%	1/4W
R670	1-247-807-31	CARBON	100	5%	1/4W
R671	1-247-807-31	CARBON	100	5%	1/4W
R686	1-247-807-31	CARBON	100	5%	1/4W
R687	1-247-807-31	CARBON	100	5%	1/4W
R688	1-247-807-31	CARBON	100	5%	1/4W
R689	1-247-807-31	CARBON	100	5%	1/4W
R690	1-247-807-31	CARBON	100	5%	1/4W
R691	1-247-807-31	CARBON	100	5%	1/4W
R801	1-249-417-11	CARBON	1K	5%	1/4W F
R802	1-249-438-11	CARBON	56K	5%	1/4W
R803	1-247-822-11	CARBON	430	5%	1/4W
R804	1-249-438-11	CARBON	56K	5%	1/4W
R805	1-249-417-11	CARBON	1K	5%	1/4W F
R806	1-249-431-11	CARBON	15K	5%	1/4W
R807	1-249-441-11	CARBON	100K	5%	1/4W
⚠R808	1-220-893-11	METAL	0.22	10%	5W
R809	1-260-076-11	CARBON	10	5%	1/2W
⚠R810	1-215-872-11	METAL OXIDE	3.3K	5%	1W F
⚠R811	1-212-881-11	FUSIBLE	100	5%	1/4W F
⚠R812	1-202-972-61	FUSIBLE	1	5%	1/4W F
R813	1-249-435-11	CARBON	33K	5%	1/4W
R814	1-249-421-11	CARBON	2.2K	5%	1/4W F
R815	1-249-433-11	CARBON	22K	5%	1/4W
R816	1-249-429-11	CARBON	10K	5%	1/4W
R817	1-249-421-11	CARBON	2.2K	5%	1/4W F
R818	1-249-435-11	CARBON	33K	5%	1/4W
R819	1-249-439-11	CARBON	68K	5%	1/4W
R831	1-249-441-11	CARBON	100K	5%	1/4W
R832	1-249-441-11	CARBON	100K	5%	1/4W
R833	1-260-117-11	CARBON	33K	5%	1/2W
R842	1-249-441-11	CARBON	100K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-247-822-11	CARBON	430	5%	1/4W
R854	1-249-438-11	CARBON	56K	5%	1/4W
R855	1-249-417-11	CARBON	1K	5%	1/4W F
R856	1-249-431-11	CARBON	15K	5%	1/4W
R857	1-249-441-11	CARBON	100K	5%	1/4W
⚠R858	1-220-893-11	METAL	0.22	10%	5W
R859	1-260-076-11	CARBON	10	5%	1/2W
⚠R860	1-215-872-11	METAL OXIDE	3.3K	5%	1W F
⚠R861	1-212-881-11	FUSIBLE	100	5%	1/4W F
R881	1-249-435-11	CARBON	33K	5%	1/4W
R882	1-249-435-11	CARBON	33K	5%	1/4W
R892	1-249-441-11	CARBON	100K	5%	1/4W
R901	1-247-843-11	CARBON	3.3K	5%	1/4W
R902	1-249-415-11	CARBON	680	5%	1/4W F
R903	1-249-419-11	CARBON	1.5K	5%	1/4W F
R904	1-249-414-11	CARBON	560	5%	1/4W F
R905	1-249-425-11	CARBON	4.7K	5%	1/4W F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN | MOTOR (SLIDE) | MOTOR (TURN) | PANEL

Ref. No.	Part No.	Description			Remark
R906	1-247-843-11	CARBON	3.3K	5%	1/4W
R907	1-249-415-11	CARBON	680	5%	1/4W F
R908	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-249-430-11	CARBON	12K	5%	1/4W
R911	1-249-409-11	CARBON	220	5%	1/4W F
R916	1-249-421-11	CARBON	2.2K	5%	1/4W F
R917	1-260-087-81	CARBON	100	5%	1/2W F
R918	1-249-421-11	CARBON	2.2K	5%	1/4W F
R919	1-249-409-11	CARBON	220	5%	1/4W F
R920	1-249-383-11	CARBON	1.5	5%	1/6W F
R921	1-249-383-11	CARBON	1.5	5%	1/6W F
R931	1-249-429-11	CARBON	10K	5%	1/4W
		< VARIABLE RESISTOR >			
RV301	1-238-600-11	RES, ADJ, CARBON 10K			
RV351	1-238-600-11	RES, ADJ, CARBON 10K			
		< RELAY >			
RY401	1-755-168-11	RELAY			
		< THERMISTOR >			
TH831	1-807-796-11	THERMISTOR			
		< TERMINAL >			
TM401	1-537-240-31	TERMINAL BOARD (CHECKER PIN)(SPEAKER)			
TM402	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SURROUND SPEAKER)			
		< VIBRATOR >			
X601	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X613	1-781-107-21	VIBRATOR, SERAMIC (16MHz)			
**********					
*	1-658-578-11	MOTOR (SLIDE) BOARD			
		**********			
		< CAPACITOR >			
C801	1-162-306-11	CERAMIC	0.01uF	20%	16V
C804	1-162-306-11	CERAMIC	0.01uF	20%	16V
C805	1-126-964-11	ELECT	10uF	20%	50V
		< CONNECTOR >			
* CN801	1-568-947-11	PIN, CONNECTOR 9P			
		< DIODE >			
D801	8-719-921-48	DIODE MTZJ-T-72-5.6C (Malaysia PRODUCT)			
D801	8-719-109-89	DIODE RD5.6ESB2 (Indonesia PRODUCT)			
D804	8-719-911-19	DIODE 1SS119			
D805	8-719-911-19	DIODE 1SS119			
		< IC >			
IC801	8-759-274-09	IC BA6286N			
		< RESISTOR >			
R801	1-249-401-11	CARBON	47	5%	1/4W F

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S801	1-762-527-11	SWITCH, ROTARY (OPEN/CLOSE)			
**********					
*	1-658-577-11	MOTOR (TURN) BOARD			
		**********			
		< CAPACITOR >			
C701	1-162-306-11	CERAMIC	0.01uF	20%	16V
C702	1-126-964-11	ELECT	10uF	20%	50V
C705	1-162-306-11	CERAMIC	0.01uF	20%	16V
		< CONNECTOR >			
CN703	1-750-413-11	CONNECTOR, FFC/FPC 8P			
CN704	1-506-469-11	PIN, CONNECTOR 4P			
		< DIODE >			
D701	8-719-983-66	DIODE MTZJ-T-72-3.6B			
		< IC >			
IC701	8-759-633-65	IC M54641L			
		< RESISTOR >			
R706	1-249-411-11	CARBON	330	5%	1/4W
R707	1-249-401-11	CARBON	47	5%	1/4W F
**********					
	A-4419-146-A	PANEL BOARD, COMPLETE			
		**********			
*	4-214-439-11	HOLDER, FL TUBE			
*	4-949-935-51	CUSHION (FL)			
		< CAPACITOR >			
C601	1-124-589-11	ELECT	47uF	20%	16V
C602	1-126-163-11	ELECT	4.7uF	20%	50V
C603	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C604	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C605	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C606	1-168-038-91	CERAMIC CHIP	0.1uF		25V
C608	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C610	1-124-589-11	ELECT	47uF	20%	16V
C611	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C612	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C614	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C615	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C616	1-126-157-11	ELECT	10uF	20%	16V
C617	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C618	1-126-157-11	ELECT	10uF	20%	16V
C619	1-126-157-11	ELECT	10uF	20%	16V
C620	1-126-163-11	ELECT	4.7uF	20%	50V
C621	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C622	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C625	1-126-157-11	ELECT	10uF	20%	16V

Ref. No.	Part No.	Description			Remark
C626	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C628	1-126-163-11	ELECT	4.7uF	20%	50V
C629	1-124-589-11	ELECT	47uF	20%	16V
C630	1-126-157-11	ELECT	10uF	20%	16V
C631	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C632	1-124-589-11	ELECT	47uF	20%	16V
C633	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C634	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C703	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C704	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C711	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C712	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C713	1-126-160-11	ELECT	1uF	20%	50V
C714	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C715	1-124-465-00	ELECT	0.47uF	20%	50V
C716	1-124-465-00	ELECT	0.47uF	20%	50V
C717	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C718	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C719	1-126-160-11	ELECT	1uF	20%	50V
C720	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C721	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C722	1-164-344-11	CERAMIC CHIP	0.068uF	10%	25V
C723	1-124-589-11	ELECT	47uF	20%	16V
C724	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C725	1-124-589-11	ELECT	47uF	20%	16V
C731	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C732	1-124-257-00	ELECT	2.2uF	20%	50V
C733	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C734	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C735	1-126-157-11	ELECT	10uF	20%	16V
C736	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C737	1-124-463-00	ELECT	0.1uF	20%	50V
C738	1-124-257-00	ELECT	2.2uF	20%	50V
C739	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C740	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C741	1-126-157-11	ELECT	10uF	20%	16V
C742	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C743	1-124-257-00	ELECT	2.2uF	20%	50V
C744	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C745	1-124-257-00	ELECT	2.2uF	20%	50V
C747	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C782	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C783	1-163-031-11	CERAMIC CHIP	0.01uF		50V
C851	1-163-038-91	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN601	1-568-867-11	SOCKET, CONNECTOR 25P			
		< DIODE >			
D601	8-719-058-24	DIODE RB501V-40TE-17			
D608	8-719-074-27	DIODE SELUIE10CXM-LC (LEFT)			
D609	8-719-074-24	DIODE SELUD10CXM-LC (RIGHT)			
D611	8-719-071-41	DIODE SELS5923C-TP15 (SYNC EQ)			
D612	8-719-071-44	DIODE SELS5223C-TP15 (EFFECT)			
D613	8-719-071-41	DIODE SELS5923C-TP15 (SYNC BASS L)			
D614	8-719-071-41	DIODE SELS5923C-TP15 (SYNC BASS H)			
D615	8-719-063-93	DIODE SLR325VC-N-T32 (NON STOP)			

Ref. No.	Part No.	Description	Remark
D616	8-719-057-97	DIODE SEL5923A-TP15 (VIDEO CD)	
D617	8-719-057-97	DIODE SEL5923A-TP15 (PBC OFF)	
D618	8-719-057-97	DIODE SEL5923A-TP15 (PBC)	
D619	8-719-056-13	DIODE SML79423C-TP15 (▶II)	
D620	8-719-073-47	DIODE SML72923C-TP15 (REC, PAUSE/START	
D621	8-719-056-13	DIODE SML79423C-TP15 (AUTO BPM)	
D622	8-719-057-97	DIODE SEL5923A-TP15 (+/▶▶)	
D623	8-719-057-97	DIODE SEL5923A-TP15 (-/◀◀)	
D624	8-719-063-93	DIODE SLR325VC-N-T32 (JOG)	
D625	8-719-063-93	DIODE SLR325VC-N-T32 (ENTER/ENXT)	
D626	8-719-057-97	DIODE SEL5923A-TP15 (GROOVE)	
D627	8-719-057-97	DIODE SEL5923A-TP15 (PAD A)	
D628	8-719-057-97	DIODE SEL5923A-TP15 (PAD B)	
D629	8-719-057-97	DIODE SEL5923A-TP15 (BEAT ON/OFF)	
D630	8-719-057-97	DIODE SEL5923A-TP15 (JAM)	
D631	8-719-058-03	DIODE SEL5423E-TP15 (◀ (B DECK))	
D632	8-719-058-03	DIODE SEL5423E-TP15 (▶ (B DECK))	
D633	8-719-058-03	DIODE SEL5423E-TP15 (◀ (A DECK))	
D634	8-719-058-03	DIODE SEL5423E-TP15 (▶ (A DECK))	
D635	8-719-063-93	DIODE SLR325VC-N-T32 (TIMER SELECT)	
D701	8-719-976-99	DIODE DTZ5.1B	
		< GROUND PLATE >	
EP601	1-537-770-21	TERMINAL BOARD, GROUND	
		< FERRITE BEAD >	
FB601	1-414-234-22	INDUCTOR CHIP 0UH	
FB602	1-414-234-22	INDUCTOR CHIP 0UH	
		< FLUORESCENT INDICATOR >	
FL601	1-517-831-31	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC601	8-759-589-14	IC TMP88CS76F-6005	
IC602	8-749-011-05	IC GP1U28X	
IC603	8-759-083-77	IC BA3830F	
IC604	8-759-342-19	IC NJU3716M-T2	
IC605	8-759-577-80	IC MSM6654A-540GS-K	
IC711	8-759-496-41	IC M65850FP-E1	
IC712	8-759-636-55	IC M5218AFP	
		< JACK >	
J701	1-785-569-11	JACK (SMALL TYPE)(PHONES)	
J711	1-785-569-11	JACK (SMALL TYPE)(MIC 1)	
J712	1-785-569-11	JACK (SMALL TYPE)(MIC 2)	
		< JUMPER RESISTOR >	
JR501	1-216-296-91	SHORT 0	
JR502	1-216-296-91	SHORT 0	
JR503	1-216-295-91	SHORT 0	
JR504	1-216-295-91	SHORT 0	
JR505	1-216-295-91	SHORT 0	
JR506	1-216-295-91	SHORT 0	
JR507	1-216-295-91	SHORT 0	
JR508	1-216-296-91	SHORT 0	
JR509	1-216-296-91	SHORT 0	

PANEL

Ref. No.	Part No.	Description			Remark
JR510	1-216-296-91	SHORT	0		
JR511	1-216-296-91	SHORT	0		
JR512	1-216-296-91	SHORT	0		
JR513	1-216-296-91	SHORT	0		
JR514	1-216-296-91	SHORT	0		
JR515	1-216-296-91	SHORT	0		
JR516	1-216-295-91	SHORT	0		
JR517	1-216-296-91	SHORT	0		
JR518	1-216-296-91	SHORT	0		
JR519	1-216-295-91	SHORT	0		
		< COIL >			
L601	1-412-029-11	INDUCTOR CHIP	10uH		
L602	1-412-032-11	INDUCTOR CHIP	100uH		
		< TRANSISTOR >			
Q601	8-729-118-00	TRANSISTOR	2SB1116-L		
Q602	8-729-118-00	TRANSISTOR	2SB1116-L		
Q603	8-729-119-78	TRANSISTOR	2SC403SP-51		
Q604	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q605	8-729-119-78	TRANSISTOR	2SC403SP-51		
Q607	8-729-900-36	TRANSISTOR	DTC124ES		
Q608	8-729-900-36	TRANSISTOR	DTC124ES		
Q610	8-729-900-74	TRANSISTOR	DTC143TS		
Q611	8-729-900-74	TRANSISTOR	DTC143TS		
Q612	8-729-900-74	TRANSISTOR	DTC143TS		
Q613	8-729-900-74	TRANSISTOR	DTC143TS		
Q614	8-729-900-74	TRANSISTOR	DTC143TS		
Q615	8-729-900-74	TRANSISTOR	DTC143TS		
Q616	8-729-900-74	TRANSISTOR	DTC143TS		
Q620	8-729-119-76	TRANSISTOR	2SA1175-HFE		
		< RESISTOR >			
R601	1-216-025-91	RES,CHIP	100	5%	1/10W
R602	1-216-073-00	METAL CHIP	10K	5%	1/10W
R603	1-216-025-91	RES,CHIP	100	5%	1/10W
R604	1-216-025-91	RES,CHIP	100	5%	1/10W
R605	1-216-073-00	METAL CHIP	10K	5%	1/10W
R606	1-216-017-91	RES,CHIP	47	5%	1/10W
R607	1-216-111-00	METAL CHIP	390K	5%	1/10W
R608	1-216-111-00	METAL CHIP	390K	5%	1/10W
R609	1-216-097-91	RES,CHIP	100K	5%	1/10W
R610	1-216-073-00	METAL CHIP	10K	5%	1/10W
R611	1-216-097-91	RES,CHIP	100K	5%	1/10W
R612	1-216-017-91	RES,CHIP	47	5%	1/10W
R613	1-216-085-00	METAL CHIP	33K	5%	1/10W
R614	1-216-113-00	METAL CHIP	470K	5%	1/10W
R616	1-216-121-91	RES,CHIP	1M	5%	1/10W
R617	1-216-097-91	RES,CHIP	100K	5%	1/10W
R618	1-216-017-91	RES,CHIP	47	5%	1/10W
R619	1-216-043-91	RES,CHIP	560	5%	1/10W
R620	1-216-073-00	METAL CHIP	10K	5%	1/10W
R621	1-216-073-00	METAL CHIP	10K	5%	1/10W
R622	1-216-035-00	METAL CHIP	270	5%	1/10W
R623	1-216-037-00	METAL CHIP	330	5%	1/10W
R624	1-216-041-00	METAL CHIP	470	5%	1/10W
R625	1-216-043-91	RES,CHIP	560	5%	1/10W
R626	1-216-045-00	METAL CHIP	680	5%	1/10W
R627	1-216-049-91	RES,CHIP	1K	5%	1/10W
R628	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R629	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R630	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R631	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R632	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R633	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R634	1-216-073-00	METAL CHIP	10K	5%	1/10W
R635	1-216-077-00	METAL CHIP	15K	5%	1/10W
R636	1-216-073-00	METAL CHIP	10K	5%	1/10W
R637	1-216-035-00	METAL CHIP	270	5%	1/10W
R638	1-216-037-00	METAL CHIP	330	5%	1/10W
R639	1-216-041-00	METAL CHIP	470	5%	1/10W
R640	1-216-043-91	RES,CHIP	560	5%	1/10W
R641	1-216-045-00	METAL CHIP	680	5%	1/10W
R642	1-216-049-91	RES,CHIP	1K	5%	1/10W
R643	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R644	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R645	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R646	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R647	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R648	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R649	1-216-073-00	METAL CHIP	10K	5%	1/10W
R650	1-216-035-00	METAL CHIP	270	5%	1/10W
R651	1-216-037-00	METAL CHIP	330	5%	1/10W
R652	1-216-041-00	METAL CHIP	470	5%	1/10W
R653	1-216-043-91	RES,CHIP	560	5%	1/10W
R654	1-216-045-00	METAL CHIP	680	5%	1/10W
R655	1-216-073-00	METAL CHIP	10K	5%	1/10W
R656	1-216-035-00	METAL CHIP	270	5%	1/10W
R657	1-216-037-00	METAL CHIP	330	5%	1/10W
R658	1-216-041-00	METAL CHIP	470	5%	1/10W
R659	1-216-043-91	RES,CHIP	560	5%	1/10W
R660	1-216-045-00	METAL CHIP	680	5%	1/10W
R661	1-216-049-91	RES,CHIP	1K	5%	1/10W
R662	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R663	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R664	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R665	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R666	1-216-065-91	RES,CHIP	4.7K	5%	1/10W
R667	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R668	1-216-073-00	METAL CHIP	10K	5%	1/10W
R669	1-216-077-00	METAL CHIP	15K	5%	1/10W
R670	1-216-083-00	METAL CHIP	27K	5%	1/10W
R671	1-216-091-00	METAL CHIP	56K	5%	1/10W
R672	1-216-049-91	RES,CHIP	1K	5%	1/10W
R673	1-216-089-91	RES,CHIP	47K	5%	1/10W
R674	1-216-049-91	RES,CHIP	1K	5%	1/10W
R675	1-216-073-00	METAL CHIP	10K	5%	1/10W
R676	1-216-089-91	RES,CHIP	47K	5%	1/10W
R677	1-216-089-91	RES,CHIP	47K	5%	1/10W
R678	1-216-073-00	METAL CHIP	10K	5%	1/10W
R680	1-216-073-00	METAL CHIP	10K	5%	1/10W
R681	1-216-073-00	METAL CHIP	10K	5%	1/10W
R682	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R683	1-216-073-00	METAL CHIP	10K	5%	1/10W
R684	1-216-073-00	METAL CHIP	10K	5%	1/10W
R685	1-216-073-00	METAL CHIP	10K	5%	1/10W
R686	1-216-097-91	RES,CHIP	100K	5%	1/10W
R687	1-216-097-91	RES,CHIP	100K	5%	1/10W
R688	1-216-073-00	METAL CHIP	10K	5%	1/10W
R689	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R691	1-216-097-91	RES,CHIP	100K	5%	1/10W
R692	1-216-097-91	RES,CHIP	100K	5%	1/10W
R693	1-216-097-91	RES,CHIP	100K	5%	1/10W
R694	1-216-097-91	RES,CHIP	100K	5%	1/10W
R695	1-216-097-91	RES,CHIP	100K	5%	1/10W
R696	1-216-097-91	RES,CHIP	100K	5%	1/10W
R697	1-216-097-91	RES,CHIP	100K	5%	1/10W
R698	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R699	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R701	1-216-017-91	RES,CHIP	47	5%	1/10W
R711	1-216-081-00	METAL CHIP	22K	5%	1/10W
R712	1-216-081-00	METAL CHIP	22K	5%	1/10W
R713	1-216-081-00	METAL CHIP	22K	5%	1/10W
R714	1-216-089-91	RES,CHIP	47K	5%	1/10W
R715	1-216-081-00	METAL CHIP	22K	5%	1/10W
R716	1-216-077-00	METAL CHIP	15K	5%	1/10W
R717	1-216-081-00	METAL CHIP	22K	5%	1/10W
R718	1-216-081-00	METAL CHIP	22K	5%	1/10W
R719	1-216-099-00	METAL CHIP	120K	5%	1/10W
R721	1-216-073-00	METAL CHIP	10K	5%	1/10W
R722	1-216-049-91	RES,CHIP	1K	5%	1/10W
R723	1-216-097-91	RES,CHIP	100K	5%	1/10W
R724	1-216-049-91	RES,CHIP	1K	5%	1/10W
R726	1-216-073-00	METAL CHIP	10K	5%	1/10W
R727	1-216-077-00	METAL CHIP	15K	5%	1/10W
R728	1-216-103-00	METAL CHIP	180K	5%	1/10W
R729	1-216-025-91	RES,CHIP	100	5%	1/10W
R731	1-216-049-91	RES,CHIP	1K	5%	1/10W
R732	1-216-073-00	METAL CHIP	10K	5%	1/10W
R751	1-216-029-00	METAL CHIP	150	5%	1/10W
R752	1-216-029-00	METAL CHIP	150	5%	1/10W
R753	1-216-029-00	METAL CHIP	150	5%	1/10W
R754	1-216-029-00	METAL CHIP	150	5%	1/10W
R755	1-216-029-00	METAL CHIP	150	5%	1/10W
R756	1-216-029-00	METAL CHIP	150	5%	1/10W
R757	1-216-029-00	METAL CHIP	150	5%	1/10W
R758	1-216-022-00	METAL CHIP	75	5%	1/10W
R759	1-216-022-00	METAL CHIP	75	5%	1/10W
R760	1-216-022-00	METAL CHIP	75	5%	1/10W
R761	1-216-022-00	METAL CHIP	75	5%	1/10W
R762	1-216-029-00	METAL CHIP	150	5%	1/10W
R763	1-216-029-00	METAL CHIP	150	5%	1/10W
R764	1-216-019-00	METAL CHIP	56	5%	1/10W
R765	1-216-019-00	METAL CHIP	56	5%	1/10W
R766	1-216-029-00	METAL CHIP	150	5%	1/10W
R767	1-216-022-00	METAL CHIP	75	5%	1/10W
R768	1-216-029-00	METAL CHIP	150	5%	1/10W
R769	1-216-029-00	METAL CHIP	150	5%	1/10W
R770	1-216-029-00	METAL CHIP	150	5%	1/10W
R771	1-216-029-00	METAL CHIP	150	5%	1/10W
R772	1-216-029-00	METAL CHIP	150	5%	1/10W
R773	1-216-022-00	METAL CHIP	75	5%	1/10W
R775	1-216-029-00	METAL CHIP	150	5%	1/10W
R776	1-216-019-00	METAL CHIP	56	5%	1/10W
R777	1-216-025-91	RES,CHIP	100	5%	1/10W
R778	1-216-025-91	RES,CHIP	100	5%	1/10W
R780	1-216-073-00	METAL CHIP	10K	5%	1/10W
R781	1-216-029-00	METAL CHIP	150	5%	1/10W
R782	1-216-029-00	METAL CHIP	150	5%	1/10W
R783	1-216-073-00	METAL CHIP	10K	5%	1/10W
R784	1-216-081-00	METAL CHIP	22K	5%	1/10W
R785	1-216-081-00	METAL CHIP	22K	5%	1/10W
R786	1-216-049-91	RES,CHIP	1K	5%	1/10W
R787	1-216-095-00	METAL CHIP	82K	5%	1/10W
R788	1-216-085-00	RES,CHIP	33K	5%	1/10W
R789	1-216-091-00	METAL CHIP	56K	5%	1/10W
R790	1-216-055-00	METAL CHIP	1.8K	5%	1/10W

< VARIABLE RESISTOR >

RV711	1-225-739-11	RES, VAR 50K (ECHO LEVEL)
RV712	1-225-739-11	RES, VAR 50K (MIC-VOL)

< SWITCH >

S601	1-473-534-11	ENCODER, ROTARY (JOG/◀◀ ▬▬ ▶▶)
S602	1-473-392-11	ENCODER, ROTARY (VOLUME)
S611	1-762-875-21	SWITCH, KEYBOARD (SYNC BASE)
S612	1-762-875-21	SWITCH, KEYBOARD (SYNC EQ)
S613	1-762-875-21	SWITCH, KEYBOARD (KARAOKE PON/MIX)
S614	1-762-875-21	SWITCH, KEYBOARD (CD NON STOP)
S615	1-762-875-21	SWITCH, KEYBOARD (SURROUND)
S616	1-762-875-21	SWITCH, KEYBOARD (DBFB)
S617	1-762-875-21	SWITCH, KEYBOARD (ENTER/NEXT)
S618	1-762-875-21	SWITCH, KEYBOARD (-/◀◀)
S619	1-762-875-21	SWITCH, KEYBOARD (+/▶▶)
S620	1-762-875-21	SWITCH, KEYBOARD (GROOVE)
S621	1-762-875-21	SWITCH, KEYBOARD (PAD B)
S622	1-762-875-21	SWITCH, KEYBOARD (BEAT SPEED)
S623	1-762-875-21	SWITCH, KEYBOARD (BEAT SEC)
S624	1-762-875-21	SWITCH, KEYBOARD (BEAT ON/OFF)
S625	1-762-875-21	SWITCH, KEYBOARD (REC, PUASE/START)
S626	1-762-875-21	SWITCH, KEYBOARD (HI DUB)
S627	1-762-875-21	SWITCH, KEYBOARD (CD SYNC)
S628	1-762-875-21	SWITCH, KEYBOARD (PAD A)
S629	1-762-875-21	SWITCH, KEYBOARD (BEAT MIX)
S630	1-762-875-21	SWITCH, KEYBOARD (BEAT JAM)
S631	1-762-875-21	SWITCH, KEYBOARD (BEAT LEVEL)
S632	1-762-875-21	SWITCH, KEYBOARD (SELECT)
S633	1-762-875-21	SWITCH, KEYBOARD (RETURN)
S634	1-762-875-21	SWITCH, KEYBOARD (PREY)
S635	1-762-875-21	SWITCH, KEYBOARD (NEXT)
S636	1-762-875-21	SWITCH, KEYBOARD (AUTO BPM)
S637	1-762-875-21	SWITCH, KEYBOARD (CD FLASH)
S638	1-762-875-21	SWITCH, KEYBOARD (P FILE MEMORY)
S639	1-762-875-21	SWITCH, KEYBOARD (GEQ CONTROL)
S640	1-762-875-21	SWITCH, KEYBOARD (FILE SELECT)
S641	1-762-875-21	SWITCH, KEYBOARD (EFFECT)
S642	1-762-875-21	SWITCH, KEYBOARD (TUNER/BAND)

PANEL **SENSOR** **SURROUND** **TRANS**

Ref. No.	Part No.	Description	Remark
S643	1-762-875-21	SWITCH, KEYBOARD (▶II)	
S644	1-762-875-21	SWITCH, KEYBOARD (■)	
S645	1-762-875-21	SWITCH, KEYBOARD (B:►)	
S646	1-762-875-21	SWITCH, KEYBOARD (B:◄)	
S647	1-762-875-21	SWITCH, KEYBOARD (A:►)	
S648	1-762-875-21	SWITCH, KEYBOARD (A:◄)	
S649	1-762-875-21	SWITCH, KEYBOARD (FUNCTION)	
S650	1-762-875-21	SWITCH, KEYBOARD (CD LOOP)	
S651	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)	
S652	1-762-875-21	SWITCH, KEYBOARD (CLOCK/TIME SET)	
S653	1-762-875-21	SWITCH, KEYBOARD (TIME SELECT)	
S654	1-762-875-21	SWITCH, KEYBOARD (SPECTRUM ANALYZER)	
S655	1-762-875-21	SWITCH, KEYBOARD (REPEAT STERO/MONO)	
S656	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE DOLBY ON)	
S657	1-762-875-21	SWITCH, KEYBOARD (EDIT DIRECTION TUNER MEMORY)	
		< VIBRATOR >	
X601	1-781-312-11	VIBRATOR, CERAMIC (12.5MHz)	
X602	1-767-353-11	VIBRATOR, CERAMIC (4.09MHz)	

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*	1-658-576-11	SENSOR BOARD **********	
		< IC >	
IC702	8-749-924-18	IC PHOTO INTERRUPTER RPI-1391	
IC703	8-749-924-30	IC PHOTO REFLECTOR GP2S28	

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	A-4419-159-A	SURROUND BOARD, COMPLETE **********			
		< CAPACITOR >			
C1201	1-162-203-31	CERAMIC	15PF	5%	50V
C1202	1-162-216-31	CERAMIC	51PF	5%	50V
C1203	1-162-282-31	CERAMIC	100PF	10%	50V
C1204	1-162-283-31	CERAMIC	120PF	10%	50V
C1205	1-162-279-31	CERAMIC	75PF	10%	50V
C1206	1-136-165-00	FILM	0.1uF	5%	50V
C1207	1-162-306-11	CERAMIC	0.01uF	20%	16V
C1208	1-126-934-11	ELECT	220uF	20%	10V
C1209	1-136-165-00	FILM	0.1uF	5%	50V
C1210	1-126-964-11	ELECT	10uF	20%	50V
C1211	1-126-964-11	ELECT	10uF	20%	50V
C1212	1-162-306-11	CERAMIC	0.01uF	20%	16V
C1213	1-126-934-11	ELECT	220uF	20%	10V
C1214	1-136-167-00	FILM	0.15uF	5%	50V
C1215	1-162-303-11	CERAMIC	0.0033uF	30%	16V
C1216	1-136-167-00	FILM	0.15uF	5%	50V
C1217	1-124-252-00	ELECT	0.33uF	20%	50V
C1218	1-126-934-11	ELECT	220uF	20%	10V
C1219	1-126-964-11	ELECT	10uF	20%	50V
C1220	1-126-964-11	ELECT	10uF	20%	50V
C1221	1-162-216-31	CERAMIC	51PF	5%	50V

Ref. No.	Part No.	Description			Remark
		< CONNECTOR >			
CN1201	1-564-788-11	PIN, CONNECTOR 8P			
		< IC >			
IC1201	8-759-579-61	IC LV1150			
		< COIL >			
L1201	1-410-509-11	INDUCTOR	10uH		
		< RESISTOR >			
R1201	1-247-807-31	CARBON	100	5%	1/4W
R1203	1-249-441-11	CARBON	100K	5%	1/4W
R1204	1-249-441-11	CARBON	100K	5%	1/4W
R1205	1-249-417-11	CARBON	1K	5%	1/4W F
R1206	1-249-441-11	CARBON	100K	5%	1/4W
R1207	1-249-441-11	CARBON	100K	5%	1/4W

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*	1-672-474-11	TRANS BOARD **********			
		< CAPACITOR >			
C971	1-128-563-11	ELECT	100uF	20%	100V
C972	1-126-960-11	ELECT	1uF	20%	50V
C973	1-126-947-11	ELECT	47uF	20%	35V
		< CONNECTOR >			
* CN901	1-564-527-11	PLUG, CONNECTOR 12P			
CN902	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE)3P			
CN951	1-564-321-00	PIN, CONNECTOR 2P			
		< DIODE >			
D971	8-719-024-99	DIODE 11ES2-NTA2B			
D972	8-719-056-97	DIODE UDZ-TE-17-27B			
D973	8-719-056-74	DIODE UDZ-TE-17-3.0B			
		< FUSE >			
⚠F951	1-532-506-31	FUSE (T6.3AL/250V)(EXCEPT TH)			
⚠F952	1-532-465-31	FUSE (T3.15AL/250V)(EXCEPT TH)			
⚠F953	1-532-465-31	FUSE (T3.15AL/250V)			
⚠F961	1-532-505-31	FUSE (T5AL/250V)			
⚠F962	1-532-505-31	FUSE (T5AL/250V)			
		< FUSE HOLDER >			
FH951	1-533-233-21	HOLDER, FUSE			
FH952	1-533-233-21	HOLDER, FUSE			
FH953	1-533-233-21	HOLDER, FUSE			
FH954	1-533-233-21	HOLDER, FUSE			
FH955	1-533-233-21	HOLDER, FUSE			
FH956	1-533-233-21	HOLDER, FUSE			
FH961	1-533-233-21	HOLDER, FUSE			
FH962	1-533-233-21	HOLDER, FUSE			
FH963	1-533-233-21	HOLDER, FUSE			
FH964	1-533-233-21	HOLDER, FUSE			

Ref. No.	Part No.	Description			Remark
		< TRANSISTOR >			
Q971	8-729-048-52	TRANSISTOR 2SA1932(TP)			
		< RESISTOR >			
⚠R951	1-219-120-11	FUSIBLE	0.15	5%	1/4W F
⚠R952	1-219-120-11	FUSIBLE	0.15	5%	1/4W F
⚠R953	1-219-120-11	FUSIBLE	0.15	5%	1/4W F
⚠R971	1-216-455-11	METAL OXIDE	560	5%	2W F
R972	1-216-085-00	METAL CHIP	33K	5%	1/10W
R973	1-216-073-00	METAL CHIP	10K	5%	1/10W
R974	1-216-025-91	RES,CHIP	100	5%	1/10W
R975	1-216-025-91	RES,CHIP	100	5%	1/10W
R976	1-216-085-00	METAL CHIP	33K	5%	1/10W
R977	1-216-085-00	METAL CHIP	33K	5%	1/10W
		< SWITCH >			
⚠S951	1-771-291-11	SWITCH, POWER (VOLTAGE SELECTOR) (EXCEPT VX8:TH)			
		< TRANSFORMER >			
⚠T951	1-433-556-11	TRANSFORMER, POWER			
**********					
	A-4724-727-A	VIDEO BOARD, COMPLETE **********			
		< CAPACITOR >			
C101	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C102	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C103	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C104	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C201	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C202	1-163-143-00	CERAMIC CHIP	0.0012uF	5%	50V
C203	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C301	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C302	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C303	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C304	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C305	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C306	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C310	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C311	1-216-295-91	SHORT	0		
C313	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C314	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C318	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C319	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C401	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C402	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C403	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C404	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C405	1-110-530-11	ELECT CHIP	1000uF	20%	6.3V
C406	1-110-530-11	ELECT CHIP	1000uF	20%	6.3V
C409	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C410	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C411	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C412	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C413	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C452	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C501	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C502	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C503	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C504	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C505	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C506	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C507	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C509	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C510	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C531	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C532	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C535	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C536	1-126-193-11	ELECT	1uF	20%	50V
C537	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C539	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C540	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C541	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C542	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C543	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C544	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C545	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C546	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C547	1-126-193-11	ELECT	1uF	20%	50V
C548	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C549	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C550	1-163-275-11	CERAMIC CHIP	0.001uF	5%	50V
C551	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C552	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C553	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C555	1-124-779-00	ELECT CHIP	10uF	20%	16V
C556	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C559	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C560	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C561	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C562	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C563	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C564	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C565	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C566	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C568	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C569	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C570	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C571	1-128-065-11	ELECT CHIP	68MF	20%	10V
C573	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C574	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C576	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C577	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
		< CONNECTOR >			
CN501	1-770-706-11	CONNECTOR, FFC/FPC 23P			
CN503	1-779-416-11	CONNECTOR,FFC(LIF(NON-ZIF))13P			
		< TRIMMER >			
CT503	1-141-539-11	CAP, ADJ 10PF			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

VIDEO

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D301	8-719-054-23	DIODE RB706D-40-T146	
D501	8-719-422-12	DIODE MA8039	
D502	8-719-018-51	DIODE CL-170R-CD	
		< IC >	
IC101	8-759-701-39	IC NJM3404AM	
IC401	8-759-262-00	IC MC14576CF	
IC501	8-759-269-92	IC SN74HCU04ANS-E20	
IC502	8-759-587-67	IC M30620MC-A05FP	
IC504	8-759-269-92	IC SN74HCU04ANS-E20	
IC505	8-759-535-48	IC CL680T-D1	
IC506	8-759-573-23	IC LC372100PM-J48-TLA	
IC507	8-759-342-01	IC MB814260-70PJER	
IC509	8-759-535-62	IC PCM1727E-2/T2	
		< JACK >	
J301	1-537-943-11	TERMINAL, S (S VIDEO OUT)	
J302	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	
		< JUMPER RESISTOR >	
JW101	1-216-295-91	SHORT 0	
JW201	1-216-295-91	SHORT 0	
JW401	1-216-295-91	SHORT 0	
JW402	1-216-295-91	SHORT 0	
JW403	1-216-295-91	SHORT 0	
JW404	1-216-295-91	SHORT 0	
JW405	1-216-295-91	SHORT 0	
JW413	1-216-295-91	SHORT 0	
JW421	1-216-295-91	SHORT 0	
JW422	1-216-295-91	SHORT 0	
JW502	1-216-295-91	SHORT 0	
JW503	1-216-295-91	SHORT 0	
JW504	1-216-295-91	SHORT 0	
JW505	1-216-295-91	SHORT 0	
		< COIL >	
L301	1-410-372-21	INDUCTOR CHIP 1.8uH	
L302	1-410-372-21	INDUCTOR CHIP 1.8uH	
L501	1-216-296-91	SHORT 0	
L502	1-216-296-91	SHORT 0	
L503	1-216-296-91	SHORT 0	
L504	1-410-375-11	INDUCTOR CHIP 3.3uH	
L505	1-216-296-91	SHORT 0	
L506	1-216-296-91	SHORT 0	
L507	1-216-296-91	SHORT 0	
L508	1-216-296-91	SHORT 0	
L509	1-216-296-91	SHORT 0	
L510	1-216-296-91	SHORT 0	
		< TRANSISTOR >	
Q301	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q302	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q303	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q304	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q306	8-729-027-44	TRANSISTOR DTC114TKA-T146	
Q307	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q308	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q310	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q453	8-729-920-72	TRANSISTOR 2SA1037K-T-146-QR	
Q454	8-729-920-72	TRANSISTOR 2SA1037K-T-146-QR	
Q502	8-729-024-91	TRANSISTOR 2SC2712-GL-TE85L	
Q531	8-729-140-75	TRANSISTOR 2SD999-CLCK	
		< RESISTOR >	
R101	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R102	1-208-441-61	RES,CHIP 1.5K 2% 1/10W	
R103	1-208-441-61	RES,CHIP 1.5K 2% 1/10W	
R105	1-216-295-91	SHORT 0	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-208-441-61	RES,CHIP 1.5K 2% 1/10W	
R203	1-208-441-61	RES,CHIP 1.5K 2% 1/10W	
R205	1-216-295-91	SHORT 0	
R301	1-216-624-11	METAL CHIP 75 0.5% 1/10W	
R302	1-216-624-11	METAL CHIP 75 0.5% 1/10W	
R305	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R306	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R307	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R308	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R309	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R312	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R313	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R314	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R315	1-216-047-91	RES,CHIP 820 5% 1/10W	
R316	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	
R317	1-216-683-11	METAL CHIP 22K 0.5% 1/10W	
R318	1-216-033-00	METAL CHIP 220 5% 1/10W	
R319	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R320	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R321	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R324	1-216-022-00	METAL CHIP 75 5% 1/10W	
R325	1-216-295-91	SHORT 0	
R327	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R328	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
R329	1-216-649-11	METAL CHIP 820 0.5% 1/10W	
R332	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
R333	1-216-046-00	METAL CHIP 750 5% 1/10W	
R335	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R336	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R340	1-216-022-00	METAL CHIP 75 5% 1/10W	
R341	1-216-121-91	RES,CHIP 1M 5% 1/10W	
R342	1-216-022-00	METAL CHIP 75 5% 1/10W	
R403	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R404	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R405	1-216-065-91	RES,CHIP 4.7K 5% 1/10W	
R406	1-216-081-00	METAL CHIP 22K 5% 1/10W	
R407	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R408	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R409	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R410	1-216-049-91	RES,CHIP 1K 5% 1/10W	
R411	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R412	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R414	1-216-081-00	METAL CHIP 22K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-073-00	METAL CHIP	10K	5%	1/10W
R425	1-216-073-00	METAL CHIP	10K	5%	1/10W
R426	1-216-073-00	METAL CHIP	10K	5%	1/10W
R457	1-216-025-91	RES,CHIP	100	5%	1/10W
R458	1-216-025-91	RES,CHIP	100	5%	1/10W
R459	1-216-025-91	RES,CHIP	100	5%	1/10W
R461	1-216-025-91	RES,CHIP	100	5%	1/10W
R462	1-216-025-91	RES,CHIP	100	5%	1/10W
R463	1-216-025-91	RES,CHIP	100	5%	1/10W
R464	1-216-025-91	RES,CHIP	100	5%	1/10W
R501	1-216-025-91	RES,CHIP	100	5%	1/10W
R502	1-216-025-91	RES,CHIP	100	5%	1/10W
R503	1-216-025-91	RES,CHIP	100	5%	1/10W
R504	1-216-025-91	RES,CHIP	100	5%	1/10W
R505	1-216-025-91	RES,CHIP	100	5%	1/10W
R506	1-216-025-91	RES,CHIP	100	5%	1/10W
R507	1-216-073-00	METAL CHIP	10K	5%	1/10W
R508	1-216-081-00	METAL CHIP	22K	5%	1/10W
R509	1-216-081-00	METAL CHIP	22K	5%	1/10W
R510	1-216-081-00	METAL CHIP	22K	5%	1/10W
R511	1-216-081-00	METAL CHIP	22K	5%	1/10W
R512	1-216-081-00	METAL CHIP	22K	5%	1/10W
R513	1-216-081-00	METAL CHIP	22K	5%	1/10W
R514	1-216-081-00	METAL CHIP	22K	5%	1/10W
R516	1-216-073-00	METAL CHIP	10K	5%	1/10W
R517	1-216-073-00	METAL CHIP	10K	5%	1/10W
R518	1-216-073-00	METAL CHIP	10K	5%	1/10W
R519	1-216-025-91	RES,CHIP	100	5%	1/10W
R520	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R523	1-216-013-00	METAL CHIP	33	5%	1/10W
R530	1-216-081-00	METAL CHIP	22K	5%	1/10W
R531	1-216-025-91	RES,CHIP	100	5%	1/10W
R532	1-216-025-91	RES,CHIP	100	5%	1/10W
R533	1-216-025-91	RES,CHIP	100	5%	1/10W
R534	1-216-073-00	METAL CHIP	10K	5%	1/10W
R535	1-216-073-00	METAL CHIP	10K	5%	1/10W
R536	1-216-033-00	METAL CHIP	220	5%	1/10W
R537	1-216-025-91	RES,CHIP	100	5%	1/10W
R538	1-216-073-00	METAL CHIP	10K	5%	1/10W
R542	1-216-049-91	RES,CHIP	1K	5%	1/10W
R543	1-216-685-11	METAL CHIP	27K	0.5%	1/10W
R544	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W
R545	1-216-025-91	RES,CHIP	100	5%	1/10W
R546	1-216-049-91	RES,CHIP	1K	5%	1/10W
R547	1-216-295-91	SHORT	0		
R548	1-216-049-91	RES,CHIP	1K	5%	1/10W
R549	1-216-025-91	RES,CHIP	100	5%	1/10W
R550	1-216-025-91	RES,CHIP	100	5%	1/10W
R551	1-216-025-91	RES,CHIP	100	5%	1/10W
R552	1-216-025-91	RES,CHIP	100	5%	1/10W
R554	1-216-025-91	RES,CHIP	100	5%	1/10W
R555	1-216-121-91	RES,CHIP	1M	5%	1/10W
R556	1-216-025-91	RES,CHIP	100	5%	1/10W
R557	1-216-025-91	RES,CHIP	100	5%	1/10W
R558	1-216-073-00	METAL CHIP	10K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R559	1-216-073-00	METAL CHIP	10K	5%	1/10W
R560	1-216-051-00	METAL CHIP	1.2K	5%	1/10W
R561	1-216-049-91	RES,CHIP	1K	5%	1/10W
R562	1-216-025-91	RES,CHIP	100	5%	1/10W
R563	1-216-025-91	RES,CHIP	100	5%	1/10W
R564	1-216-025-91	RES,CHIP	100	5%	1/10W
R565	1-216-025-91	RES,CHIP	100	5%	1/10W
R566	1-216-025-91	RES,CHIP	100	5%	1/10W
R567	1-216-073-00	METAL CHIP	10K	5%	1/10W
R568	1-216-073-00	METAL CHIP	10K	5%	1/10W
R569	1-216-073-00	METAL CHIP	10K	5%	1/10W
R572	1-216-073-00	METAL CHIP	10K	5%	1/10W
R573	1-216-073-00	METAL CHIP	10K	5%	1/10W
R574	1-216-073-00	METAL CHIP	10K	5%	1/10W
R577	1-216-081-00	METAL CHIP	22K	5%	1/10W
R578	1-216-081-00	METAL CHIP	22K	5%	1/10W
R579	1-216-073-00	METAL CHIP	10K	5%	1/10W
R580	1-216-073-00	METAL CHIP	10K	5%	1/10W
		< SWITCH >			
S501	1-571-395-11	SWITCH, SLIDE (SYSTEM SELECTOR)			
		< VIBRATOR >			
X501	1-767-510-11	VIBRATOR, CERAMIC (10MHz)			
X503	1-767-519-11	VIBRATOR, CRYSTAL (27MHz)			

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		MISCELLANEOUS
		**********
5	1-233-545-11	TUNER UNIT (TH)
5	1-233-546-13	ENCAPSULATED COMPONENT (EXCEPT TH)
9	1-790-927-11	WIRE (FLAT TYPE) (13 CORE)
10	1-775-212-11	WIRE (FLAT TYPE) (23 CORE)
55	1-769-977-11	WIRE (FLAT TYPE)(13 CORE) (TH)
55	1-773-009-11	WIRE (FLAT TYPE)(15 CORE) (150mm) (EXCEPT TH)
56	1-773-024-11	WIRE (FLAT TYPE)(15 CORE) (320mm)
58	1-569-007-11	ADAPTOR, CONVERSION 2P (E,IA)
58	1-569-008-21	ADAPTOR, CONVERSION 2P (EA,SP,MY,TW)
58	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (HK)
⚠59	1-575-651-11	CORD, POWER (EA,SP,HK,MY,TW)
⚠59	1-575-653-11	CORD, POWER (E,IA,TH)
60	1-773-042-11	WIRE (FLAT TYPE)(17 CORE)
116	1-773-223-11	WIRE (FLAT TYPE)(25 CORE)
122	1-675-195-11	PUSH CATCH STOPPER (A)
124	1-675-196-11	PUSH CATCH STOPPER (B)
257	1-452-925-21	MAGNET ASSY
258	1-776-042-11	WIRE (FLAT TYPE) (8 CORE)
⚠301	8-820-020-02	OPTICAL PICK-UP KSS-213D/Q-NP
302	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)
FL601	1-517-831-31	INDICATOR TUBE, FLUORESCENT
HP101	A-2056-681-B	DECK (A) ASSY, HEAD (230AWR2)
HP101	A-2056-683-B	DECK (A) ASSY, HEAD (230PWR2)
HRPE101	A-2056-682-B	DECK (B) ASSY, HEAD (230AWR2)
HRPE101	A-2056-684-B	DECK (B) ASSY, HEAD (230PWR2)
M1	A-2004-628-A	MOTOR ASSY, CAPSTAN

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
M101	X-4917-523-4	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M701	A-4672-004-A	MOTOR ASSY (TURN)	
M801	A-4672-004-A	MOTOR ASSY (SLIDE)	
M901	1-763-072-11	FAN, D.C.	
S811	1-473-335-11	ENCODER, ROTARY	
⚠T951	1-433-556-11	TRANSFORMER, POWER	

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****
HARDWARE LIST
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#1	7-685-871-01	SCREW +BVTT 3X6 (S)
#2	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#3	7-685-880-09	SCREW +BVTT 4X6 (S)
#4	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3
#5	7-685-852-04	SCREW +BVTT 2X5 (S)
#7	7-682-553-04	SCREW +P 3X20
#8	7-685-851-04	SCREW +BVTT 2X4 (S)
#9	7-628-254-15	SCREW +PS 2.6X6
#10	7-628-254-50	SCREW +PS 2.6X16
#11	7-685-861-01	SCREW +BVTT 2.6X5 (S)
#13	7-685-880-09	SCREW +BVTP 3X10 TYPE2 N-S

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